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# The Chat

Vol. 58 WINTER 1994 No. 1

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Quarterly Bulletin of Carolina Bird Club, Inc.
The Ornithological Society of the Carolinas

# THE CHAT

(USPS 101-020)

VOL. 58 WINTER 1994 NO. 1

Published by the Carolina Bird Club, Inc.

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THE CHAT (USPS 101-020) is published quarterly by the Carolina Bird Club, Inc., with headquarters at the North Carolina State Museum of Natural Sciences, 102 N. Salisbury Street, Raleigh, NC 27603 POSTMASTER: Send address changes to Carolina Bird Club, THE CHAT, P. O. Box 29555, Raleigh, N. C. 27626-0555.

PAGE CHARGES: Authors who have funds available for page charges are requested to remit same at the rate of $40.00 per page. CBC Headquarters will provide statements required for your business records.

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## SPRING BIRD COUNT—1993

PEGGY V. FEREBEE

We had 17 locations participate in the 1993 Spring Bird Count, up from 13 last year. However, most of the counts were still from the Piedmont section of North Carolina. We had no reports from coastal North Carolina this year. In South Carolina, all the counts were from the Coastal Plain. We had two new areas there; the Congaree Swamp and Hunting Island State Park (thank you Robin Carter!). Last year Columbia alone was reported. Hopefully the publication of last year's count encouraged participation this year and will continue to encourage it in the future. It would be nice to have wider variety of locations counted.

With the increase in participation came an expected increase in numbers. 86,409 individuals were reported this year, versus 72,364 last year. The addition of more coastal areas accounts for much of this increase, as well as more people in the field (1,224.5 field hours in 93 versus 1,001 field hours in 92). There was actually a decrease in the number of species reported; 226 species this year compared to 229 species last year. In most of the areas, generally speaking there were slightly fewer species and fewer individual birds reported, along with slightly fewer field hours. The weather over the area was reasonably good.

The documentation for most unusual species was generally good and only a few records were questioned. I appreciate the compilers doing such a good job. I wouldn't mind a few more comments on your overall impression of your particular count results. One of the things we have all witnessed in our birding is the changing environment which we know is affecting bird populations. Descriptions of such changes helps provide background that is useful in interpreting the count results and no one is in a better position to do that than each area's compiler.

I did not have access to the unpublished counts prior to 1992, but based on the summary from last year, there are some generalizations that can be made.

Double-crested Cormorants increased over last year and seem to be quite comfortable inland, appearing in all count areas but two. Canada Geese have also continued to increase in almost every count area. Starlings, Rock Doves and House Finches also show an increase. If it's any consolation, House Sparrows continue to decline. Some species show what appears to be an increase in numbers over last year but much of this increase is due to the new count areas that were included this year. If you look at the numbers for species reported in the counts in both 92 and 93, these birds actually declined or remained low in those areas: woodcock, snipe, bobwhite, coots, shrikes and Bachman's Sparrow. There are still no Barn Owls. The overall numbers of vireos and warblers declined as well, a situation that does not surprise most of us. Some of this decline may represent the low point of a population cycle, but much is also due to the loss of habitat and other environmental factors.

## COMPILER'S COMMENTS

**ALNC** - Alamance, NC. 36° 04'N, 79°24'W, as described Christmas '92, center Alamance County Courthouse, Graham, NC. May 2; 6:30 a.m. to 7:00 p.m. Temp 60° to 82°F, Wind none, Sky clear.

**Participants:** Compiler - Robert E. Mize, 1114 McPherson Rd., Burlington, NC 27215; John Alderman, Rick Brown, Rodney Brown, Sheryl Brown, Thom Cox, Zach Cox, Robert Mize.

**CANC** - Charlotte, NC. center intersection of Woodlawn Rd. and South Blvd., Charlotte, NC. May 1; 4:30 a.m. to 8:45 p.m. Temp 60° to 75° F, Wind none, Sky clear.

**Participants:** Compiler - Kevin B, Hennings, 8912 Danson Dr., Charlotte, NC, 28277; Karen Claperton, Leto Copely, Terri Hatcher, Kevin Hennings, Katherine Higgins, Carol Horton, Robert Jones, Diana Kidman, Tom Ledford, Faye Metzel, Taylor Piephoff, Lizbeth Stockman, Judy Walker, Harriet Whitsett, David Wright.

**Compiler's comments:** David Wright and party saw and heard the Marsh Wren in a large cattail marsh at a quarry in south Mecklenburg County. This migrant has been recorded at this site for the past 4 or 5 springs. Taylor Piephoff and party saw the Sedge Wren at McAlpine Greenway Park in Charlotte.

**GVNC** - Greenville, NC. 35° 35'N, 77°14'W, as described Christmas '92, center jct. 1762 & SR 33, Greenville, NC. May 1, 5:00 a.m. to 9:00 p.m. Temp. 58° to 80°F, Wind none, Sky light fog and haze early morning, burned off by 10:00 a.m.

**Participants:** Compiler -John Wright, 1953A Quail Ridge Rd, Greenville, NC 27858; Co-compiler -Dr. Veronica Sexauer Pantelidis, 106 Lakeview Dr., Greenville, NC 27858; Suzanne Allred, Mary Atkeson, Joe Biggs, Ann Bosley, Lorrayne Graff, Kim Greene, Ken Harrell, Mike Hoekstra, David Kaminski, Jill Kaminski, Nick Pantelidis, Jr., Veronica Pantelidis, Grace Smith, James Smith, Paul Tardif, Russ Tyndall, John Wright, Paula Wright.

**SPNC** - Southern Pines, NC. 35°13'N 79°19'W, as described Christmas '92, center 1 mile NE of Skyline. May 2; 5:15 a.m. to 5:30 p.m. Temp. 57°–82°F, Wind none, Precipitation none, Sky partly cloudy.

**Participants:** Compiler - Dr. J.H. Carter, III, P.O. Box 891, Southern Pines, NC 28388.; Jackie Britcher, J.H. Carter, III, Faust D'Ambrosi, Esther Fleming, Charlotte Gantz, David Gordon, John Hammond, Dean Holzorat, Tom Howard, Marion Jones, Jane LaMarch, Al McDonald, Brandon McDonald, Billy McKenzie, Vaud A. Travis, Libba Watson. Feeders: Crawford Caton, Robert Corey, Winifred Monroe.

**RVNC** - Raven Rock State Park, NC. 36°24'N 77°38'W, as described Christmas '92, center railroad bridge over Cape Fear River at Lillington, NC. May 1; 5:30 a.m. to 5:30 p.m. Temp 54° to 92°F, Wind SW at 0-10 mph, Sky partly cloudy.

**Participants:** Compiler -Paul C, Hart, Raven Rock State Park, Rt. 3, Box 1005 Lillington, NC 27546; David Brown, John Bumgarner, Susan Bumgarner, Pete Cashwell, Paul Hart, Tom Howard, Bobby Lufty, Larry Rose, Mary Stevens.

**Compiler's comment:** Both the number of species and the number of individuals seen were down slightly over the past few years. This is probably attributed to the fact that there were only nine observers on this count. Tom Howard observed a non-singing Swainson's Warbler along the Upper Little River, the first observation of this species for this count. John and Susan Bumgarner took some time out during the afternoon in an attempt to relocate the Swainson's. They were unsuccessful in that effort. However, while they were near that location they observed the American Swallow-tailed Kite. Paul Hart observed the Horned Grebe during count week on a small pond near the park entrance. The bird was well along in its molt to breeding plumage.

**RANC** - RALEIGH, NC. 35°46`N 78°40`N, as described Christmas 92, center Norfolk and Southern Railroad and Lake Wheeler Rd. crossing, May 1, 4:30 a.m.–7:00 p.m. Temp 55° to 83°F, Wind S at 5-10 m.p.h., Sky mostly cloudy

**Participants:** Compiler - Bob Hader, 3313 Cheswick Drive, Raleigh, NC 27609; Bill Armstrong, Anne Beckwith, Hal Carmichael, John Conners, Monti Cox, Debbie Crouse, Leigh DeNeef, Kent Fiala, John Finnegan, Peggy Franklin, Bob Hader, Diane Hardy, Stephanie Horton, Wayne Irvin, Vernon Junke, Will Kimler, Ken Knapp, Joan McQuire, Jim Mulholland, Jeremy Nance, Monica Nees, Tom Quay, Will Rowland, Harriet Sato, Clyde Smith, Sterling Southern.

**DUNC** - DURHAM, NC. 36°09`N 78°40`W, as described Christmas '92, center 1 mi. N and one mi. E of jct. of Eno River and US 501. April 25, 5:00 a.m. to 5:00 p.m. Temp 57° to 81°F, Wind SW at 5-15 m.p.h., Sky clear

**Participants:** Compiler -Michael Schultz, 5504 Woodberry Rd., Durham, NC 27707; Bryan Bombers, Norm Budnitz, Chuck Byrd, Anson Cooke, James Dykes, Peggy Franklin, Maurice Graves, Steve Graves, Scott Hartley, Ken Knapp, Janet Krakauer, Tom Krakauer, Owen McConnell, Patsy McConnell, Dorothy Rettig, Richard Rettig, Harriet Sato, Michael Schultz, Doug Shields, Julia Shields, Mike Skalla, Jonathan Steere, Karen Stirrup, Edith Tatum, Carol Tingley.

**Compiler's comments:** Swainson's Thrushes were seen by Tom and Janet Krakauer. They were observed in good light and were in the deep woods along a forest trail between Johnson Mill Rd. and the Little River. A second group was seen by Janet along the Little River roughly 1/2 mile from the first bird (as the thrush flies). She also saw two more at the junction of White Horse Run and the little River.

**CPNC** - Chapel Hill, NC, 35° 55`N 79° 03`W, as described Christmas '92, intersection of Franklin St. and Airport Rd. in Chapel Hill, May 2, 5:00 a.m. to 5:30 p.m. temp 65° to 80°F, Wind none, Sky clear and sunny.

**Participants:** Compiler - Anson Cooke, 1210 Huntsman Dr., Durham, NC 27713; B. Bomberg, A. Booth, S. Brackett, N. Budnitz, H. Carmichael,

B. Chase, E. Coffman, A. Cooke, G. Dodge, W. H. Fang, K. Fiala, P. Franklin, M. Graves, S. Graves, P. Haaland, B. Hall, C. Hamilton, W. Harwood, F. Hommersand, S. Kahler, K. Knapp, I. Kandt. M. Kandt, R. Kandt, J. Keighton, V. Kopp, H. Link, G. London, K. Lunderstrom, R. McNeil, Z. Morrow, M. Nees, E. Pardue, L. Pardue, L. Parmelee, A. Pippen, J. Pippin, K. Powell, D. Rettig, R. Rettig, B. Rice, T. Roberts, B. Roth, H. Sato, L. Schultz, J. Shields, E. Spalt, G. Swanson, P. Timmons, E. Wagsaff, S. Wilburn .

**Compiler's comments:** This year's spring count turned up a number of species that have not been seen for several years. Included in this group were Horned Grebe, Anhinga, Great Egret, Laughing Gull, Veery, and Pine Siskin. A pair of Anhinga were seen by Jeffrey and Anne Pippin. This same pair of Anhinga were also seen by another party.

Barbara Roth and Carol Hamilton spotted an unusual bird which research showed to be a **Sun Parakeet**, a native of South America. Obviously an escaped bird, hopefully someone can shed some light on the origin of this bird.

A number of species were not seen this year, including the following: American Kestrel, Common Snipe, Screech Owl, Common Nighthawk, Yellow-bellied Sapsucker, White-crowned Sparrow, and a number of warblers. The number of migrating warblers was very low and this needs to be closely watched during the next few years.

**JLNC:** Jordan Lake, NC. 35°42'N 79°03'W, as described Christmas '92, center jct. New Hope River & SR 1700 (now under water), May 9, 4:15 a.m to 9:00 p.m. Temp. 56° to 82°, Wind 0-5 (direction unknown), Sky hazy early morning, then clear to noon; partly cloudy afternoon.

**Participants:** Compiler-Barbara Roth, 7 Lone Pine Road, Chapel Hill, NC 27514; Barbara Beaman, Anne Leigh Broughton, Norman Budnitz, Patrick Coin, Anson Cooke, Jr., Claudia Egelhoff, Jim Fry, Bryan Goldston, Maurice Graves, Steve Graves, Perry Haaland, B. Hader, Bob Hale, Steve Hall, Carol Hay, Walton Haywood, Joan Healy, Chuck Helmick, Russell Herman, Francis Hommersand, Tom Howard, Steve Kahler, Jim Keighton, John Kent, Kenneth Knapp, Janet Krakauer, Tom Krakauer, Barbara Logue, Terry Louge, Gertrude London, Ann Maker, Monica Nees, Rick Payne, Dorothy Rettig, Richard Rettig, Barbara Roth, Doug Shadwick, Peg Schultz, Lydia Smith, Pamela Timmons, Carol Tingley, Andrew Upshaw.

**Compiler's comments:** The results of this year's count were totally different from those of 1992, despite the closeness of the date, as well as weather on count date. The difference lies in the number of migrants. This time we had 20 warbler species, vs. 29 last year. Last year there were also more sandpipers, and gull and tern species. Last year there were 72 Bank Swallows, this year just one. The numbers of most of the residents remained quite constant. Prairie Warblers seem to be decreasing, but their habitat is growing up. N. Bobwhite has also been undergoing a steady decline. This year no Loggerhead Shrikes were found. To analyze these fluctuations in migrant counts we would need to know about spring weather patterns each year. The effect of the early spring storm and late blooming may have had an effect, but how did this affect the migration from more southern climes? Of course, we are not on a prime migra-

tion route. I am certainly glad that publication of many counts will appear in THE CHAT again, which will help in providing understanding.

Cattle Egrets have never shown up here for a spring count before, although during the period of bulldozing for the lake, we had herons of many kinds. An excellent description was offered by Steve Graves. Three parties reported this species and maps of locations are included in the report.

A Common Merganser (drake) was reported by Steve Graves. It showed no tendency to fly and may have been ill or molting.

Although we rarely find Black-billed Cuckoos in migration, a pair was heard by Andy Upshaw and Bryan Goldson, who provided details. Another party also thought they heard one call, which provided confirmatory evidence they are coming through.

Bachman's Sparrows have been nesting in old fields growing up in pines in the south part of our circle, for the past several years. Harry LeGrand found them first, and Terry Logue has studied them thoroughly since then, since they nest in his count area.

Four Ospreys nests were seen. All the Bald Eagles were adults; 8 parties saw them, but there were probably at least two duplications. I hunted very hard at dusk for Common Nighthawks; found none.

**GRNC** - Greensboro, NC. 36°04'N 79°47W, as described Christmas '92, center intersection of Pisgah Church Road and Highway 220N. May 1, 6:30 a.m. to 6:00 p.m. Temp 58°- 82°F, Wind S at 7 mph Sky, clear in the morning and high overcast in the afternoon

**Participants:** Compiler - Donald Allen, 2611 David Caldwell Dr., Greensboro, NC 27408. Carolyn Allen, Donald Allen, Virginia Bell, Jean Berry, Dennis Burnette, Lynn Burnette, Sue Cole, Phil Crisp, Peggy Ferebee, Stan Gilliam, Jim Grimes, Susie Hodnett, Sally Howell, Dan Hunt, Elizabeth Link, Henry Link, Jean McCoy, Clarence Maddocks, Jim Maddocks, Pam Odear, Elizabeth Ogburn, Tom Street, Ernest Swarts, Lucille Swarts, Emily Talbert, Emily Tyler, Judy Underkoffler.

**Compiler's comments:** While the weather was good for the count, a number of our better field birders were absent and this resulted in some areas being only partly covered or not covered at all.

There has been a slow but steady increase in the numbers of Double-crested Cormorants for several years. Five different groups reported observing this species. The Great Egret was reported by Carolyn Allen and Emily Tyler. It was observed for some time at the A&T Farm where it was feeding on a small pond/tank. They did notice the yellow bill and dark legs. They observed what they believed to be a second bird at a different location. Since they could not be sure that the first bird had not moved, they reported it as one sighting. The Ring-necked Ducks were under observation by Emily Tyler, Judy Underkoffler, and others on Lake Townsend for some time. The accepted view has come to be that one of the birds was injured/ill and the other had remained with it rather than migrating. The Acadian Flycatcher was reported by Henry Link who based his identification on appearance and call. Three different groups each reported one. All identifications of the Fish Crows were based upon hearing the bird's call.

**WSNC** - Winston-Salem, NC. 36°05'N 80°18'W, as described Christmas '92, center jct. Business I-40 and Silas Creek Parkway. May 1, 5:00 a.m. to 9:00 p.m. Temp 62°- 82°F, Wind S at 0-5 mph , Sky mostly sunny.

**Participants:** Compiler - Mabry Hopkins, 313 Susanna St., Kernersville, NC 27284; Kay Bergey, Todd Buchanan, Reggie Burt, Zack Bynum, John Carter, Lee Carter, Peg Cochrane, Doug Dampiere, Marie Dantier, Ann Davidson, Doug DeNeve, Jim Dickerson, David Disher, Susan Disher, Cynthia Donaldson, May Eriksen, Charles Frost, Dale Ganes, Gardner Gidley, Louise Gosset, Billy Hammond, John Hammond, Susan Hammond, Bert Hollifield, Mabry Hopkins, Ed Jones, Grant Jones, Lois Jones, Barbara Kendrick, Joyce Mauck, Osborne Mauck, Pat Mauck, Jim May, Hewson Michie, Ellen Milford, Susan Moore, George Morgan, Margaret Morgan, Mary Morse, Tom Mowbray, Ed Mulvey, Margaret Mulvey, Ann Newsome, Elsie Orr, Lea Nading, Ann Pollard, Paul Powers, Lloyd Ramsay, Jackie Shelton, Jerry Shiffert, David Shuford, Marilyn Shuping, Ramona Snavely, C. Sommer, Nancy Sommer, Paul Spain, Jim Spencer, Gray Tuttle, Don Whitener, Mark Wilson, Bob Witherington.

**ICNC**- Iredell County, NC. 35°54'N 82°53'W, as described Christmas '92, center Chipley Ford Road Bridge at South Yadkin River. May 9, 6:30 a.m., to 5:00 p.m. Temp. 52° to 82°F, Wind WNW at 0-5 mph , Sky sunny in the morning, mostly sunny in the afternoon.

**Participants**- Compiler - Sam Cathey, 130 Park Street, Statesville, NC 28677; Larry Ashley, Penny Benbow, Debbie Birnley, Sam Cathey, Bill English, Lois Goforth, Thad Goforth, Steve Hedrick, Richard Holshouser, Flippen Jones, Larry Marlin, Dick Mize, Garnet Underwood, Ron Underwood.

**BRNC**- Brevard, NC.,35°11'N 82°41'W, as described Christmas '92, center, Rich Mountain Fire Tower May 1, 7 a.m.. to 5 p.m., Temp. 40° to 70°F, Wind 0-15, Sky clear.

**Participants:** Compiler - Norma Siebenheller, 187 Glen Cannon Dr., Pisgah Forest, NC. 28768; Elaine Badger, Dorothy Bauer, Ruth Blanchard, Dick Blee, Sylvia Blee, Pat Bohan, Jack Bronson, Midge Bronson, Bernice Cross, Jack Cross, John Dean, Eloise Fenneberg, Mary Fortune-Kniffin, Kim Garrett, Jeanne Grimmenga, Lois Haskill, Ruth Hathaway, Ed Hathaway, Bill Hough, Jean Hough, Becky Huggins, John Huggins, Tom Joyce, Ruth Klock, Mary Ellen Lindley, John Mather, Louis Mather, Betty McIlwain, Carolyn Millis, Rick Mills, Judy Mitchell Reese Mitchell, Erika Parmi, Cliff Petitt, Lois Pettitt, Jo Anne Pope, Beth Rogers, Florence Rogers, Speed Rogers, Mary Sauerteig, Don Seriff, Bill Siebenheller, Norma Siebenheller, Ginny Tener, Shirl Thomas, Dick Thorsell, Gladys Tietgen, Phyllis Tish, Ginny Weston, Warren Weston, Beth Wheeler, Jennifer Wren, Louise Wright.

**Compiler's comments** : The two Peregrine Falcons were seen at Caesar's Head by Dr. John Dean, who has had much experience with Peregrines. Don Seriff, the Caesar's Head naturalist has seen Peregrines regularly in that area during the spring. Seriff also reported the Hermit Thrush, a bit late but not totally unexpected. The Fox Sparrows and the White-crowneds were seen by many observers at a feeder where they have been coming for several weeks. The Double-crested Cormorant was sighted at a secluded lake

near Ceda Mt., where we have seen as many as 16 in May, and have noted it every year since about 1987.

**COSC** - Columbia, SC. 33°56'N 80°55'W, as described Christmas '92, center jct. Mill Creek and Southern Railroad. May 1, 7:00 a.m. to 10:00 p.m., Temp. 55°-80°F, Wind S at 5 mph , Sky, partly cloudy.

**Participants:** Compiler - Robin M. Carter, 4165 E. Buchanan, Columbia SC, 29206; Robin Carter, Mary Douglas, Caroline Eastman, Henry Fuseler, James Glathar, Jerry Griggs, George McCoy, Bill McWhorter, Shawn McWhorter, Robert Quattlebaum, Glenn Smith, Jack Stewart, Lula Stewart.

**Compiler's comments:** This year's spring migration was a real bust. We had a fairly good count in Columbia, mostly as a result of unusual species seen at our local catfish farm. This included a nice breeding-plumaged male Ruddy Duck, an adult Bald Eagle, and shorebirds we usually miss (such as Western Sandpiper). It is interesting to note that most of the migrant warblers were seen in the urban areas—such as Maxcy Gregg Park near the University of South Carolina campus. Observers out in the countryside found almost no migrants. The very low count of Northern Bobwhite is a trend. Many of the good bobwhite areas of five years ago are now suburban neighborhoods. The bobwhite, shrike and meadowlark habitat is now decreasing; only the House Finches are happy. The Black-crowned Night-Heron and the White-crowned Sparrow were both seen by experienced observes- very good birds in Richland County any time, but very rare in spring.

**CHSC-** Charleston, SC, as described Christmas '92. May 2, Temp 65° – 80°F, Wind ENE at less than 10 mph , Sky partly cloudy in the morning clearing by the afternoon.

**Participants:** Compiler - Edwin L. Blitch III, 16 Wyecreek Ave., Charleston, SC 29412-2525; Edwin Blitch III, Steve Compton, Ed Conradi, E. Calvin Clyde, Hal S. Currey, Nathan W. Dias, Dennis M Forsythe, Donna W. Forsythe, Julian R. Harrison, David E. Huff, Gilbert D. Huff, Roberta Huff, Theodore W. Huff, Jeremy W. James, Jennifer M. Koches, Herbert F. MacMurry, David C. McLean, Perry E. Nugent, Susan A. Simmons, Ben F. Ward.

**Compiler's comments:** This was certainly a recent all-time high spring count, maybe the record for a spring count in the Charleston Area.

**HUSC-** Hunting Island, State Park, SC. Center Hunting Island Lighthouse, (count held only in the park). April 18, 8:00 a.m. to 5:00 p.m. .Temp 65°–75°F, Wind W at 5–20 mph , Sky clear.

**Participants:** Compiler - Mike Walker, Hunting Island State Park, St. Helens Island, SC 29920; Mr. and Mrs. Larry Cattrell, Mr. and Mrs. Dennis Ducate, George Hallovan, Judy Hallovan, Mr. and Mrs. Sunny Hanckel, Sam Purth, Mike Walker.

**Compiler's comments:** This count was not done originally as a CBC spring count but Robin Carter decided to reformat it into one because we get so little from the South Carolina Coast.

Text continued on Page 15.

| Species | ALNC | CANC | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | BRNC | COSC | CHSC | HUSC | CGSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | | | 1 | 5 | | 1 | | 4 | 2 | | | | | | 25 | 5 | | 43 |
| Pied-billed Grebe | 1 | 1 | | | | | | | 2 | | | | | | 3 | | | 7 |
| Horned Grebe | | | | | * | | | 1 | | | | | | | | | | 1 |
| Northern Gannet | | | | | | | | | | | | | | | 13 | 3 | | 16 |
| Brown Pelian | | | | | | | | | | | | | | | 94 | 60 | | 154 |
| Dbl.-cr. Cormorant | 4 | 2 | 28 | 46 | | 5 | 341 | 101 | 145 | 45 | 1 | | 1 | 7 | 319 | 98 | 1 | 1,144 |
| Anhinga | | | | | | | | 2 | | | | | | 3 | 26 | | 5 | 36 |
| American Bittern | | | | | | | 1 | | | | | | | | | | | 1 |
| Least Bittern | | | | | | | 1 | | | | | | | | 8 | | | 9 |
| Great Blue Heron | 2 | 1 | 22 | 1 | 1 | 21 | 16 | 8 | 9 | 5 | 5 | 5 | 1 | 12 | 56 | 3 | 21 | 189 |
| Great Egret | | 1 | 16 | | | * | | 2 | | 1 | | | | 4 | 136 | 10 | 8 | 178 |
| Snowy Egret | | | | | | | | | | | | | | | 74 | 25 | | 99 |
| Little Blue Heron | | | | | | 1 | | | | | | | | | 26 | 9 | | 36 |
| Tricolored Heron | | | | | | | | | | | | | | | 44 | 3 | | 47 |
| Cattle Egret | | | 6 | | 2 | | | | 14 | | | | | 31 | 27 | 1 | 10 | 91 |
| Green-backed Heron | 1 | 12 | 5 | 5 | 10 | 10 | 4 | 12 | 17 | 9 | 8 | 3 | 5 | 15 | 74 | 4 | 3 | 197 |
| Black-cr. Night-Heron | | | 1 | | | | 1 | | | | | | 1 | 1 | 11 | | | 15 |
| Yellow-cr. Night-heron | | | | | | | | | | | 3 | | | | 19 | 1 | | 23 |
| White Ibis | | | | | | | | | | | | | | | 6 | | | 6 |
| Wood Stork | | | | | | | | | | | | | | | 4 | | | 4 |
| Canada Goose | 49 | 79 | 5 | 21 | 27 | 112 | 68 | 113 | 19 | 136 | 274 | 16 | 30 | 84 | | | 1 | 1,034 |
| Wood Duck | 4 | 12 | 22 | 19 | 18 | 105 | 58 | 30 | 29 | 31 | 1 | 12 | 18 | 12 | 19 | 1 | 8 | 399 |
| American Black Duck | | | | | | | | | | | | | 1 | | | | | 1 |
| Mallard | 5 | 32 | 8 | 75 | 13 | 52 | 39 | 67 | 39 | 150 | 110 | 21 | 21 | 82 | 5 | | | 719 |
| Blue-winged Teal | | | | | | * | | | 2 | | | | | 2 | 2 | | | 6 |
| Northern Shoveler | | | 2 | | | | | | | | | | | | | | | 2 |
| Ring-necked Duck | | | | | | 2 | | | | 2 | | | | | | | | 4 |
| Lesser Scaup | | | | 1 | | | | | | | | | | | | 27 | | 28 |
| Black Scoter | | | | | | | | | | | | | | | | 1 | | 1 |
| Hooded Merganser | | | | | | 1 | | | | | | | 6 | | 1 | | | 8 |
| Common Merganser | | | | | | | | | 1 | | | | | | 2 | | | 9 |
| Red-br. Merganser | | | | | | | | | | | | | | | 4 | 2 | | 6 |
| Ruddy Duck | | | | | | 3 | | | | | | | | 1 | | | | 4 |
| Duck sp. | | | | | | | | | 10 | | | | | | | | | 10 |
| Black Vulture | | 1 | | | | 1 | 3 | 17 | 15 | | | 5 | 12 | 26 | 37 | 1 | 7 | 125 |
| Turkey Vulture | 12 | 9 | 33 | 2 | 6 | 23 | 56 | 92 | 118 | 12 | 10 | 13 | 40 | 40 | 117 | 1 | 21 | 605 |

| Species | ALNC | CANC | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | BRNC | COSC | CHSC | HUSC | CGSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Osprey | 2 | 4 | 1 | | 1 | 1 | 12 | 9 | 12 | 2 | 3 | 1 | 2 | | 33 | 5 | | 88 |
| Am Swallow-td Kite | | | | | 1 | | | | | | | | | | 5 | | | 6 |
| Mississippi Kite | | | | | | | | | | | | | | 9 | 8 | | 10 | 27 |
| Bald Eagle | | | 1 | | | | 3 | 6 | 6 | | | | | 1 | 2 | 2 | | 21 |
| Northern Harrier | | | 1 | | | | * | | | | 1 | 3 | | | | | | 5 |
| Sharp-shinned Hawk | 1 | | | | | | 4 | 3 | 3 | | 1 | 2 | 1 | | | | | 15 |
| Cooper's Hawk | 3 | 1 | | 1 | | 1 | 1 | 1 | | 4 | 1 | 4 | 2 | | 3 | | | 22 |
| *Acciper* sp. | | | | | | | 1 | | 1 | 1 | | | | | | | | 3 |
| Red-shoulder Hawk | | 1 | 5 | 4 | 3 | 13 | 10 | 18 | 20 | 3 | 1 | | | 7 | 24 | | 8 | 117 |
| Brd -winged Hawk | 1 | 2 | | | 3 | | 2 | 2 | 6 | 5 | 2 | 5 | 12 | | 1 | | | 41 |
| Red-tailed Hawk | 5 | 9 | 10 | 9 | 7 | 15 | 23 | 27 | 26 | 14 | 10 | 7 | 1 | 7 | 28 | 1 | 12 | 211 |
| *Buteo* sp. | | | | | | | | | 4 | | | | | | | | | 4 |
| hawk sp. | | | | 1 | | | | | | | | | | | | | | 1 |
| American Kestral | | 3 | | | | 3 | 1 | | | 1 | 1 | | 4 | | 4 | | | 17 |
| Peregrine Falcon | | | | | | | | | | | | | 2 | | | | | 2 |
| Ruffed Grouse | | | | | | | | | | | | | 3 | | | | | 3 |
| Wild Turkey | 1 | | | | | | 1 | | | | | 4 | 1 | | 11 | | | 18 |
| Northern Bobwhite | 5 | 7 | 27 | 25 | 24 | 8 | 16 | 19 | 17 | 12 | 27 | 13 | 14 | 5 | 24 | | 10 | 253 |
| Clapper Rail | | | | | | | | | | | | | | | 15 | 1 | | 16 |
| Virginia Rail | | | | | | 2 | | | | | | | | | | | | 2 |
| Sora | | | | | | 1 | | | | | | | | | | | | 1 |
| Common Moorhen | | | | | | | | | | | | | | | 79 | | | 79 |
| American Coot | | | | 6 | | 1 | | | | | | | | | 2 | | | 9 |
| Black-bld. Plover | | | | | | | | | | | | | | | 88 | 4 | | 92 |
| Wilson's Plover | | | | | | | | | | | | | | | 15 | | | 15 |
| Semipalmated Plover | | | | | | | | | 1 | | | | | | 321 | 6 | | 328 |
| Piping Plover | | | | | | | | | | | | | | | 3 | | | 3 |
| Killdeer | 15 | 26 | 26 | 18 | 32 | 56 | 39 | 47 | 37 | 41 | 23 | 5 | 4 | 17 | 52 | | 1 | 439 |
| Am. Oystercatcher | | | | | | | | | | | | | | | 37 | 2 | | 39 |
| Greater Yellowlegs | | | 4 | | 2 | 1 | | | 1 | | 1 | | | 2 | 75 | 3 | | 89 |
| Lesser Yellowlegs | | 1 | 2 | | | 1 | | | | | | | | | 1 | | | 5 |
| Solitary Sandpiper | 5 | 4 | 1 | 1 | | 19 | 7 | 8 | 3 | 7 | 10 | 5 | * | 3 | 6 | | | 79 |
| Willet | | | | | | | | | | | | | | | 48 | 65 | | 113 |
| Spotted Sandpiper | 2 | 8 | 2 | 17 | 7 | 14 | 30 | 13 | 7 | 11 | 7 | 2 | 8 | 8 | 55 | 3 | | 194 |
| Upland Sandpiper | | | | | | 1 | | | | 2 | | | | | | | | 3 |
| Whimbrel | | | | | | | | | | | | | | | 74 | 3 | | 77 |

| Species | ALNC | CANC | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | BRNC | COSC | CHSC | HUSC | CGSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ruddy Turnstone | | | | | | | | | | | | | | | 27 | 6 | | 33 |
| Red Knot | | | | | | | | | | | | | | | 500 | 156 | | 656 |
| Sanderling | | | | | | | | | | | | | | | 93 | 41 | | 134 |
| Semip. Sandpiper | | | | | | | | | | | | | | | 6 | | | 6 |
| Western Sandpiper | | | | | | | | | | | | | | 2 | 74 | 10 | | 86 |
| Least Sandpiper | | 5 | 2 | 10 | | 5 | | | | | | | | 9 | 2 | | | 33 |
| Pectoral Sandpiper | | | | 1 | | | | | | | | | | | | | | 1 |
| Dunlin | | | | | | | | | | | | | | | 115 | 20 | | 135 |
| Sh,-billed Dowitcher | | | | | | | | | | | | | | | 114 | 7 | | 121 |
| Sandpiper Sp. | | | | | | | | | 10 | | | | | | | 30 | | 40 |
| Common Snipe | | | | 1 | | | 1 | | | | 1 | * | | | 2 | | | 5 |
| American Woodcock | | 3 | | | | 2 | | | | | | | 1 | 1 | 4 | | | 11 |
| Laughing Gull | | | | | | | | 1 | | | | | | | 405 | 83 | | 489 |
| Ring-billed Gull | | 25 | 25 | 3 | | 7 | 268 | 58 | 115 | 38 | 127 | | | 42 | 59 | 72 | | 839 |
| Herring Gull | | | | | | | | | 3 | | | | | | 281 | 37 | 1 | 322 |
| Gull sp. | | | | | | | | | 4 | | | | | | | | | 4 |
| Gull-billed Tern | | | | | | | | | | | | | | | 31 | | | 31 |
| Caspian Tern | | | | 1 | | | 11 | | 2 | | | | | | | | | 14 |
| Royal Tern | | | | | | | | | | | | | | | 82 | 90 | | 172 |
| Sandwich Tern | | | | | | | | | | | | | | | 15 | 1 | | 16 |
| Common Tern | | | | | | | | | | | | | | | 56 | 1 | | 57 |
| Forster's Tern | | | | | | | | | | 1 | | | | | 53 | 11 | | 65 |
| Least Tern | | | | | | | | | | | | | | | 88 | 1 | | 89 |
| Black Skimmer | | | | | | | | | | | | | | | 76 | 1 | | 77 |
| Rock Dove | 9 | 55 | 40 | 15 | 41 | 121 | 90 | 45 | 47 | 129 | 116 | 17 | 14 | 48 | 7 | | 6 | 800 |
| Mourning Dove | 75 | 101 | 215 | 194 | 135 | 245 | 121 | 334 | 235 | 162 | 290 | 171 | 169 | 112 | 234 | 6 | 52 | 2,851 |
| Common Ground-Dove | | | | | | | | | | | | | | | 4 | | | 4 |
| Black-bill Cuckoo | | | | | | | | | 2 | | | 3 | | | 1 | | | 6 |
| Yellow-bill Cuckoo | 2 | 2 | 7 | 5 | 1 | 2 | | 10 | 43 | 1 | 3 | 4 | 1 | 3 | 32 | 3 | 2 | 121 |
| East. Screech Owl | | 1 | 4 | 2 | 2 | 5 | 3 | | 9 | 1 | 3 | | 3 | | 3 | | | 36 |
| Gt. Horned Owl | | 2 | 3 | 2 | | 1 | 1 | 8 | 2 | 1 | 1 | 4 | 1 | | 3 | | | 29 |
| Barred Owl | | 6 | 12 | 5 | 6 | 8 | 12 | 9 | 13 | 5 | 3 | 1 | 5 | 4 | 10 | | 10 | 109 |
| Owl sp. | | | | | | | | | 1 | | | | | | | | | 1 |
| Common Nighthawk | 1 | 3 | 1 | 1 | | 12 | | | | 2 | 5 | 1 | | | 12 | 1 | | 39 |
| Chuck-will's widow | | 2 | 6 | 13 | 14 | 4 | | 1 | 6 | 1 | 5 | 2 | | 4 | 56 | 3 | | 117 |
| Whip-poor-will | 2 | 4 | 11 | 6 | 12 | 2 | 13 | 14 | 27 | 2 | 4 | 6 | 1 | 5 | 32 | 2 | | 143 |

| Species | ALNC | CANC | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | BRNC | COSC | CHSC | HUSC | CGSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chimney Swift | 31 | 96 | 34 | 57 | 92 | 101 | 59 | 252 | 225 | 119 | 193 | 149 | 63 | 79 | 374 | | 77 | 2,001 |
| Ruby-thr. Hummer | 10 | 7 | 6 | 10 | 4 | 11 | 27 | 35 | 19 | 12 | 25 | 7 | 53 | 5 | 16 | | 11 | 258 |
| Belted Kingfisher | 3 | 5 | 7 | 3 | 2 | 22 | 8 | 15 | 13 | 11 | 16 | 5 | 9 | 4 | 5 | 11 | 1 | 140 |
| Red-head. Woodpecker | | 2 | 8 | 10 | | 20 | 7 | 22 | 19 | 14 | 1 | | | 12 | 134 | 1 | 10 | 260 |
| Red-bel. Woodpeck. | 18 | 20 | 28 | 54 | 31 | 115 | 76 | 209 | 120 | 64 | 86 | 34 | 18 | 33 | 79 | 28 | 20 | 1,033 |
| Yellow-bel. Sapsucker | | | | 1 | | | 2 | | | | 1 | | 4 | | 2 | | | 10 |
| Downy Woodpecker | 2 | 16 | 9 | 7 | 8 | 31 | 24 | 41 | 36 | 23 | 17 | 9 | 26 | 4 | 20 | 3 | 8 | 284 |
| Hairy Woodpecker | 3 | 2 | 2 | 1 | 2 | 13 | 3 | 14 | 10 | 4 | 6 | 5 | 6 | 2 | 3 | 2 | 1 | 79 |
| Red-ckd Woodpecker | | | | 5 | | | | | | | | | | | 8 | | | 13 |
| Northern Flicker | 10 | 7 | 27 | 30 | 6 | 53 | 21 | 50 | 32 | 34 | 59 | 19 | 35 | 9 | 7 | 3 | 1 | 403 |
| Pil. Woodpecker | 1 | 1 | 9 | 8 | 13 | 4 | 2 | 15 | 14 | 2 | 6 | 8 | 36 | 9 | 29 | 5 | 11 | 173 |
| East. Wood-Pewee | 3 | 2 | 10 | 20 | 4 | 6 | 3 | 33 | 46 | 3 | 5 | 10 | 4 | 1 | 41 | | 13 | 204 |
| Acadian Flycatcher | | 5 | 35 | 7 | 13 | 13 | 1 | 41 | 33 | 1 | 3 | 4 | 5 | 5 | 42 | | 23 | 231 |
| Willow Flycatcher | | | | | | | | | | | | | 1 | | | | | 1 |
| Least Flycatcher | | | | | | | | | 1 | | 2 | | | | | | | 3 |
| *Empidonax* sp. | | | | | | | | | 1 | | | | | | | | | 1 |
| Eastern Phoebe | 17 | 15 | 1 | 23 | 7 | 22 | 49 | 92 | 73 | 22 | 16 | 26 | 53 | | 1 | | | 417 |
| Gt. Crest. Flycatcher | 2 | 8 | 34 | 78 | 21 | 37 | 25 | 29 | 42 | 23 | 21 | 12 | 13 | 35 | 422 | 23 | 40 | 865 |
| Eastern Kingbird | 12 | 6 | 7 | 47 | 54 | 36 | 31 | 43 | 102 | 14 | 14 | 37 | 9 | 26 | 45 | 7 | 30 | 520 |
| Horned Lark | | | 1 | 1 | | | | | | 5 | | 2 | | | | | 4 | 13 |
| Purple Martin | 30 | 5 | 30 | 92 | 20 | 54 | 4 | 52 | 154 | 75 | 190 | 224 | | 19 | 318 | | 104 | 1,371 |
| Tree Swallow | | 2 | 5 | | 3 | 1 | 9 | 10 | 33 | | * | | 4 | | 8 | | 3 | 78 |
| N. R-w. Swallow | 6 | 20 | 19 | 40 | 19 | 23 | 15 | 29 | 18 | 19 | 40 | 13 | 35 | 54 | 47 | | 3 | 400 |
| Bank Swallow | | | 4 | | 1 | * | 8 | | * | | | | | | | | | 13 |
| Cliff Swallow | | 2 | | | | | 6 | 17 | 100 | | | | | | | | | 125 |
| Barn Swallow | 18 | 20 | 56 | 125 | 112 | 139 | 106 | 73 | 224 | 43 | 59 | 113 | 125 | 48 | 344 | 2 | 28 | 1,635 |
| Swallow sp. | | | | | | | | | 7 | | | | | | | | | 7 |
| Blue Jay | 69 | 48 | 39 | 67 | 53 | 128 | 472 | 247 | 178 | 220 | 319 | 105 | 263 | 63 | 30 | 16 | 13 | 2,330 |
| American Crow | 37 | 39 | 123 | 81 | 94 | 156 | 89 | 295 | 305 | 138 | 95 | 103 | 382 | 80 | 51 | 24 | 49 | 2,141 |
| Fish Crow | | 1 | 20 | 58 | 13 | 29 | 6 | 36 | 12 | 3 | 7 | | | 9 | 56 | 19 | 21 | 290 |
| Common Raven | | | | | | | | | | | 2 | | 3 | | | | | 5 |
| Crow sp. | | | | 17 | | | | | 17 | | | | | 11 | | | | 45 |
| Carolina Chickadee | 24 | 38 | 56 | 42 | 35 | 111 | 97 | 254 | 135 | 126 | 126 | 38 | 217 | 26 | 84 | 48 | 14 | 1,471 |
| Tufted Titmouse | 38 | 20 | 32 | 51 | 58 | 137 | 103 | 306 | 167 | 128 | 136 | 34 | 175 | 22 | 73 | | 17 | 1,497 |
| White-br. Nuthatch | 1 | 2 | 4 | 8 | | 9 | 5 | 30 | 7 | 14 | 21 | 3 | 39 | 1 | 5 | | 5 | 154 |
| Brown-hd. Nuthatch | 1 | 4 | 2 | 21 | 2 | 10 | 20 | 49 | 34 | 15 | 13 | 10 | | 12 | 24 | | 4 | 221 |

| Species | ALNC | CANC | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | BRNC | COSC | CHSC | HUSC | CGSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carolina Wren | 36 | 64 | 102 | 79 | 58 | 203 | 131 | 439 | 205 | 154 | 122 | 41 | 92 | 43 | 182 | 15 | 32 | 1,998 |
| House Wren | 2 | 12 | | 1 | * | 9 | 5 | 13 | 1 | 15 | 42 | 6 | 9 | | 1 | | 1 | 117 |
| Winter Wren | | | 2 | | | | | | | | | | | | | | | 2 |
| Sedge Wren | | 1 | | | | | | | | | | | | | | | | 1 |
| Marsh Wren | | 1 | | | | | | | | | | | | | 6 | 5 | | 12 |
| Ruby-cr. Kinglet | 7 | 5 | | 2 | 3 | 7 | 20 | 4 | | 11 | 12 | | 23 | 8 | 8 | 5 | 10 | 125 |
| B-g. Gnatchatcher | 27 | 55 | 57 | 19 | 46 | 112 | 195 | 293 | 169 | 61 | 43 | 7 | 48 | 45 | 218 | 6 | 27 | 1,428 |
| Eastern Bluebird | 31 | 14 | 47 | 74 | 95 | 47 | 93 | 163 | 180 | 85 | 78 | 119 | 54 | 54 | 95 | | 12 | 1,241 |
| Veery | | 3 | * | | | 8 | | 1 | | 5 | 11 | 1 | 4 | | | | | 33 |
| Gray-cheek Thrush | | | | | | | | | | | | | | | | | 1 | 1 |
| Swainson's Thrush | | 4 | 1 | | | 2 | 3 | 9 | 4 | 11 | 15 | | | | 1 | | 1 | 51 |
| Hermit Thrush | | 1 | 1 | | | 1 | | 1 | | | * | 2 | 1 | | | | | 7 |
| Wood Thrush | 21 | 16 | 54 | 28 | 32 | 55 | 46 | 156 | 85 | 78 | 45 | 19 | 50 | 17 | 3 | | 26 | 731 |
| American Robin | 140 | 120 | 134 | 130 | 119 | 253 | 255 | 289 | 155 | 475 | 567 | 174 | 287 | 145 | 5 | | 5 | 3,253 |
| Gray Catbird | 4 | 14 | 15 | 40 | 17 | 76 | 24 | 112 | 18 | 97 | 45 | 31 | 45 | 18 | 30 | | 36 | 622 |
| No. Mockingbird | 41 | 84 | 74 | 90 | 106 | 91 | 78 | 203 | 87 | 117 | 114 | 89 | 18 | 94 | 69 | 4 | 64 | 1,423 |
| Brown Thrasher | 6 | 17 | 29 | 53 | 40 | 46 | 29 | 72 | 42 | 41 | 35 | 39 | 41 | 27 | 23 | | 7 | 547 |
| American Pipit | | | 4 | | | 2 | | | | | | | | | | | | 6 |
| Cedar Waxwing | | 28 | 9 | 15 | 66 | 13 | 29 | 69 | 146 | 74 | 81 | 53 | | 10 | 12 | 6 | 30 | 641 |
| Loggerhead Shrike | | 2 | 3 | 3 | 5 | 4 | | | | | 1 | 8 | | 10 | 19 | | 19 | 74 |
| European Starling | 178 | 206 | 413 | 127 | 183 | 328 | 316 | 424 | 225 | 487 | 405 | 173 | 186 | 152 | 109 | | | 3,912 |
| White-eyed Vireo | 8 | 17 | 28 | 29 | 24 | 51 | 48 | 48 | 51 | 10 | 10 | 3 | 15 | 28 | 103 | 1 | 51 | 525 |
| Solitary Vireo | | | | | 1 | 3 | 2 | 3 | 3 | 2 | 1 | 2 | 38 | | | 5 | | 60 |
| Yellow-thrd Vireo | 1 | 5 | 7 | 8 | 2 | 16 | 15 | 25 | 18 | 1 | 2 | 2 | 3 | 4 | 31 | | 9 | 149 |
| Red-eyed Vireo | 43 | 32 | 34 | 27 | 72 | 126 | 104 | 261 | 237 | 66 | 36 | 64 | 36 | 11 | 55 | | 37 | 1,241 |
| Blue-winged Warbler | | 4 | | | 1 | 6 | 1 | 5 | | * | 1 | | | | | | | 18 |
| Golden-wi. Warbler | | | | | | | | | 1 | 1 | | | | | | | | 2 |
| Nashville Warbler | | | | | | | | | | | 3 | | | | | | | 3 |
| Northern Parula | 8 | 21 | 25 | 11 | 17 | 61 | 47 | 79 | 56 | 10 | 10 | 5 | 51 | 26 | 235 | 4 | 72 | 738 |
| Yellow Warbler | | 9 | 3 | 3 | 2 | 12 | 4 | 2 | 4 | 3 | 16 | 3 | 7 | 9 | 7 | | 1 | 85 |
| Chest.-sided Warbler | 1 | 6 | | | | | | | 2 | 2 | 5 | 5 | 3 | | | | | 24 |
| Magnolia Warbler | | 1 | | | | 4 | | 5 | | * | 3 | | * | | | | | 13 |
| Cape May Warbler | 1 | 23 | | | | 1 | 1 | | | 21 | 48 | 3 | * | 7 | | | 1 | 106 |
| B.-thr. Blue Warbler | 1 | 14 | 17 | 2 | 7 | 23 | 9 | 22 | 7 | 11 | 12 | 2 | 10 | 9 | | | 11 | 157 |
| Yel-rmpd Warbler | 102 | 143 | 84 | 82 | 104 | 188 | 353 | 233 | 33 | 82 | 129 | 32 | 36 | 94 | 36 | 16 | 22 | 1,769 |
| B-thd Green Warbler | | 2 | | | 4 | 1 | | | | 5 | 7 | | 4 | | | | | 23 |

| Species | ALNC | CANC | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | BRNC | COSC | CHSC | HUSC | CGSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blackburian Warbler | | * | 1 | | | | | | | | 1 | | 2 | | | | | 4 |
| Yellow-thr. Warbler | 2 | 1 | 11 | 26 | 12 | 40 | 48 | 38 | 85 | | 3 | | 11 | 20 | 126 | 14 | 17 | 454 |
| Pine Warbler | 1 | 6 | 9 | 44 | 52 | 55 | 104 | 128 | 168 | 19 | 10 | 13 | 2 | 31 | 90 | 12 | 11 | 755 |
| Prairie Warbler | | 5 | 15 | 8 | 15 | 7 | 48 | 46 | 45 | 6 | 6 | 6 | * | | 176 | 2 | 21 | 406 |
| Palm Warbler | 1 | | | | 1 | 1 | 2 | | 2 | | 8 | | 23 | | 4 | | | 42 |
| Bay-breasted Warbler | | 1 | | | | | | 1 | | | | | | | | | | 2 |
| Blackpoll Warbler | 1 | 3 | 4 | 5 | | 1 | | 4 | 6 | 4 | 2 | | 2 | 2 | | | | 34 |
| Cerulean Warbler | | | | | | | | | | | | 1 | | | | | | 1 |
| Bl -&-wh.Warbler | 8 | 6 | 12 | 12 | 18 | 30 | 16 | 47 | 11 | 14 | 15 | 1 | 23 | 1 | 3 | 7 | 10 | 234 |
| American Redstart | 1 | 16 | 2 | 9 | 13 | 55 | 31 | 55 | 55 | 19 | 17 | 6 | 10 | 20 | 5 | 1 | 12 | 327 |
| Prothon. Warbler | | 6 | 33 | 10 | 12 | 23 | 10 | 21 | 26 | * | 7 | | | 20 | 146 | | 28 | 342 |
| Worm-eating Warbler | | * | 3 | 1 | 1 | 3 | | 4 | | 5 | 3 | 1 | 8 | 1 | 2 | | 3 | 35 |
| Swainson's Warbler | | | 3 | | 1 | | | | | | * | | 1 | 4 | 1 | | 9 | 19 |
| Ovenbird | 8 | 6 | 27 | 12 | 42 | 55 | 40 | 133 | 75 | 15 | 10 | | 39 | 3 | 1 | | 7 | 473 |
| North. Waterthrush | | 5 | 2 | 1 | 2 | 3 | 1 | 3 | 1 | 4 | * | | * | 6 | | | 3 | 31 |
| La. Waterthrush | | 2 | 14 | 1 | 3 | 10 | 13 | 16 | 7 | 1 | * | | 6 | * | | | 3 | 76 |
| Waterthrush sp. | | | | | | | | | | | | | | | 1 | | | 1 |
| Kentucky Warbler | | 4 | 5 | | 7 | 5 | 2 | 6 | 6 | | 1 | | | 3 | 45 | | 14 | 98 |
| Com. Yellowthroat | 15 | 33 | 35 | 40 | 58 | 88 | 129 | 133 | 104 | 39 | 38 | 29 | 42 | 32 | 346 | | 60 | 1,221 |
| Hooded Warbler | | | 8 | 5 | 23 | 17 | 27 | 42 | 25 | 3 | 3 | 1 | 69 | 4 | 54 | | 28 | 309 |
| Canada Warbler | | | | | | | 1 | | | | | | | | | | | 1 |
| Yellow-br. Chat | 2 | 10 | 18 | 22 | 12 | 33 | 9 | 66 | 76 | 14 | 7 | 31 | 4 | 7 | 156 | | 34 | 501 |
| Summer Tanager | 9 | 2 | 16 | 31 | 33 | 35 | 13 | 67 | 113 | 4 | 8 | | | 11 | 154 | 5 | 34 | 535 |
| Scarlet Tanager | 13 | 14 | 1 | 2 | 4 | 34 | 14 | 41 | 44 | 13 | 31 | 5 | 28 | 1 | 1 | | | 246 |
| Northern Cardinal | 112 | 93 | 100 | 128 | 80 | 211 | 188 | 552 | 277 | 277 | 270 | 123 | 204 | 128 | 324 | 28 | 52 | 3,147 |
| Rose-br. Grosbeak | 2 | 7 | | 1 | 2 | 7 | 1 | 3 | 6 | 10 | 37 | 2 | 16 | 1 | 1 | | 1 | 97 |
| Blue Grosbeak | 12 | 7 | 35 | 24 | 30 | 17 | 21 | 23 | 67 | 10 | 13 | 35 | 2 | 14 | 21 | 8 | 9 | 348 |
| Indigo Bunting | 27 | 28 | 33 | 13 | 26 | 45 | 17 | 146 | 170 | 48 | 42 | 125 | 23 | 27 | 97 | 7 | 42 | 916 |
| Painted Bunting | | | | | | | | | | | | | | 3 | 60 | 12 | 2 | 77 |
| Rufous-sid. Towhee | 25 | 71 | 53 | 67 | 49 | 111 | 85 | 194 | 107 | 82 | 80 | 16 | 227 | 28 | 149 | 1 | 18 | 1,363 |
| Bachman's Sparrow | | | | 3 | | | | | 1 | | | | | | 29 | | * | 33 |
| Chipping Sparrow | 33 | 23 | 16 | 74 | 45 | 77 | 50 | 212 | 118 | 89 | 49 | 26 | 96 | 2 | 6 | | 2 | 918 |
| Field Sparrow | 11 | 41 | 33 | 10 | 44 | 52 | 99 | 68 | 66 | 24 | 25 | 14 | 20 | 17 | | | 17 | 541 |
| Savannah Sparrow | | 32 | 6 | 5 | 14 | 11 | 27 | 29 | 4 | 5 | 5 | | 12 | 7 | 28 | 3 | | 188 |
| Vesper Sparrow | | | | | | | | | | | | | * | | | | | |
| Grasshopper Spar. | 2 | 13 | 1 | | 1 | 2 | 11 | 17 | 1 | 8 | 7 | 24 | 2 | | | | | 89 |

| Species | ALNC | CANC | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | BRNC | COSC | CHSC | HUSC | CGSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LeConte's Sparrow | | | | | | | | | | | | | | | 1 | | | 1 |
| Fox Sparrow | | | | | | | | | | | | | 2 | | | | | 2 |
| Song Sparrow | 24 | 27 | | 3 | 11 | 23 | 17 | 8 | 1 | 85 | 99 | 15 | 334 | | | | | 647 |
| Swamp Sparrow | | 6 | | | 8 | 3 | 16 | 15 | | 2 | | | 1 | 1 | | | | 52 |
| White-thr. Sparrow | 6 | 28 | 36 | 12 | 26 | 84 | 256 | 80 | 3 | 39 | 88 | | 42 | 38 | 14 | 7 | 4 | 763 |
| White-cr, Sparrow | | | | | | 1 | 3 | | * | | 5 | | 2 | 1 | | | | 12 |
| Dark-eyed Junco | | | | | | | | | | | | 1 | 4 | | | | | 5 |
| Bobolink | | 20 | 117 | 4 | | 270 | | 103 | 8 | | 6 | 55 | 67 | 201 | 37 | | 50 | 938 |
| R-wing. Blackbird | 22 | 99 | 126 | 68 | 93 | 130 | 208 | 151 | 156 | 73 | 150 | 44 | 119 | 135 | 404 | 32 | 33 | 2,043 |
| East. Meadowlark | 29 | 35 | 74 | 31 | 49 | 63 | 79 | 60 | 103 | 54 | 69 | 111 | 33 | 11 | 13 | | 21 | 835 |
| Boat-tailed Grackle | | | | | | | | | | | | | | | 378 | 65 | | 443 |
| Com. Grackle | 102 | 124 | 632 | 217 | 166 | 308 | 314 | 702 | 418 | 505 | 435 | 246 | 240 | 324 | 218 | 151 | 383 | 5,485 |
| Br. -head. Cowbird | 19 | 55 | 46 | 51 | 24 | 103 | 59 | 156 | 129 | 50 | 123 | 10 | 25 | 75 | 194 | 4 | 44 | 1,167 |
| Rusty Blackbird | | | | | | 4 | | 13 | 15 | | | 2 | | | | | | 34 |
| Blackbird sp. | | | | | | | | | 75 | | | | | | | | | 75 |
| Orchard Oriole | 7 | 16 | 19 | 17 | 23 | 19 | 22 | 8 | 31 | 7 | 11 | 10 | 3 | 15 | 213 | 2 | 16 | 439 |
| Northern Oriole | | 5 | 1 | 3 | | 6 | | 1 | 1 | 6 | 43 | | 2 | | | | 1 | 69 |
| Purple Finch | * | | 3 | 1 | | | 3 | | | | 5 | 7 | | | | | | 19 |
| House Finch | 25 | 47 | 35 | 51 | 6 | 110 | 139 | 273 | 56 | 80 | 217 | 18 | 79 | 76 | | | 2 | 1,214 |
| Pine Siskin | | | | | | | 1 | 2 | | | | | 47 | | | | | 50 |
| Am. Goldfinch | 37 | 69 | 18 | 61 | 35 | 120 | 223 | 373 | 184 | 255 | 183 | 382 | 232 | 70 | 2 | | | 2,244 |
| House Sparrow | 25 | 26 | 81 | 45 | 47 | 71 | 48 | 227 | 69 | 37 | 48 | 59 | 19 | 40 | 11 | | 15 | 868 |
| | | | | | | | | | | | | | | | | | | |
| # Species | 92 | 127 | 122 | 116 | 107 | 136 | 124 | 125 | 127 | 117 | 128 | 105 | 119 | 113 | 167 | 91 | 101 | 226 |
| # Individuals | 1,782 | 2,734 | 3,990 | 3,421 | 3,127 | 6,261 | 6,739 | 10,569 | 7,906 | 5,800 | 6,616 | 3,607 | 5,147 | 3,369 | 11,670 | 1,552 | 2,189 | 86,479 |
| Total Field Hours | 29 | 40.75 | 41.5 | 61 | 51 | 81 | 85 | 172 | 123 | 90.25 | 122 | 41 | 121 | 37.5 | 76.5 | 31 | 21 | 1224.5 |
| Hours on foot | 23 | 33.5 | 35 | 29 | 36.5 | 70 | 66.5 | 121 | 100.5 | 51.5 | 105.5 | 19.5 | 55.5 | 22 | 40.5 | 29 | 14 | 852.5 |
| Hours by car | 6 | 7.25 | 6.5 | 32 | 14.5 | 8 | 18.5 | 51 | 20.5 | 38.75 | 16.5 | 21.5 | 65.5 | 15.5 | 31 | 2 | 7 | 362 |
| Hours by boat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 |
| Hours Owling | 0 | 5.1 | 3.25 | 1.75 | 1.25 | 3 | 1.5 | 0 | 9 | 0.75 | 1.5 | 0 | 0 | 1 | 4.5 | 0 | 0 | 32.6 |
| Total Field miles | 125.5 | 210.5 | 182 | 337 | 251.3 | 166.5 | 230 | 449 | 360 | 365.5 | 205 | 296.5 | 351 | 199.5 | 305.5 | 20 | 115 | 4,169.8 |
| Miles on foot | 13.5 | 14.5 | 18 | 18.5 | 26.75 | 51.5 | 54 | 89 | 70 | 33.5 | 52 | 20 | 39 | 12.5 | 37 | 15 | 10 | 5574.75 |
| Miles by car | 112 | 196 | 164 | 318.5 | 224.5 | 113 | 176 | 360 | 284 | 332 | 153 | 276.5 | 312 | 187 | 252.5 | 5 | 105 | 35,71 |
| Miles by boat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 16 |
| Miles Owling | 0 | 18.6 | 25 | 5.5 | 3.25 | 2 | 2 | 0 | 3.5 | 2 | 3 | 0 | 0 | 1 | 39 | 0 | 0 | 104.85 |
| Date | 2-May | 2-May | 1-May | 2-May | 1-May | 1-May | 25-Apr | 2-May | 9-May | 1-May | 1-May | 9-May | 1-May | 1-May | 2-May | 18-Apr | 1-May | |

**CGSC-** Congaree Swamp (Richland and Calhoun Co.), SC. New circle, center 300 meters west of the confluence of Bates Mill Creek and Congaree River. May 2, 7:00 a.m. to 5 p.m. Temp: 60°–85°F, Wind 5SW at 10 mph , Sky partly cloudy

**Participants:** Compiler- Robin Carter, 4165 E. Buchanan, Columbia, SC 29206; Molly Bonnell, Robin Carter, Roger Clark, Caroline Eastman, Henry Fuseler, James Glather, Jerry Griggs, George McCoy, Bruce Smart, Glenn Smith, Peter Verbrick.

**Compiler's comments:** This is a new circle. It includes 95% of the Congaree National Monument, plus good farmland and sandhills areas as well as the towns of Gadsen and St. Matthews. Most of the effort was put into the national monument, but one party counted the Calhoun County farmlands. We will be running a Christmas Count here in December, and hope to get a few national high counts (such as White-breasted Nuthatch and Ruby-crowned Kinglet). This might be possible if the swamp is not flooded.

For this spring count, most of the good migrants (such as the Gray-cheeked Thrush) were in the floodplains forest, and most of the waterbirds were flying along the Congaree River. The high count of Common Yellowthroat was mostly due to the 6 acres of abandoned sewage treatment plant near St. Matthews, which has grown up into a cattail marsh. (No bitterns or rails were found, this time at least). We have an active Red-cockaded Woodpecker colony in the circle (part of the national monument), but no one covered this area when the birds were leaving or returning to their roosts.

**CBC Rare Bird Alert**
**(704) 332-BIRD**

# General Field Notes

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## NOTICE

Publication of any unusual sightings of birds in the Field Notes or Briefs for the Files does not imply that these reports have been accepted into the official Checklist of Birds records for either North or South Carolina. Decisions regarding the official Checklists are made by the respective State Records Committees and will be reported upon periodically in THE CHAT.

## Reexamination of Pre-1970 Nest Records of the Caspian Tern from South Carolina and Georgia

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Some oologists stated that Caspian Terns (*Sterna caspia*) nested in coastal South Carolina before 1970, the year in which breeding was first confirmed (McDaniel and Beckett 1971). Based on unpublished oological information, Johnston (1989) claimed that the Caspian Tern also nested in coastal Georgia. The purpose of this note is to reexamine pre-1970 nest records of the Caspian Tern from South Carolina and Georgia.

South Carolina.—H. L. Harllee misidentified six Royal Tern (*S. maxima*) egg sets collected in 1933 at Beaufort County as Caspian Tern eggs (WFVZ; L. Kiff, in litt.; eggs examined by Kiff).

H. Arden Edwards reported collecting a fresh clutch of two eggs at Buzzard's Island (county not identified), 4 May 1911. The eggs are those of the Caspian Tern (WFVZ; L. Kiff, in litt.). It appears to be the only egg set purportedly collected by Edwards in South Carolina. Four localities identified as "Buzzard Island" lack suitable nesting habitat for Caspian Terns. The original set mark is 6/2, while the set mark on the data slip is 436/2. Edwards probably falsified data by using sets taken by other collectors and making up his own data slips for them (L. Kiff, in litt.); it is unlikely that he ever visited South Carolina.

D. H. Johnson reported collecting a fresh clutch of three eggs for Ed J. Court at "Gull Flats" (county not identified) on 26 May 1906. The eggs are

those of the Caspian Tern (WFVZ: L. Kiff, in litt.). The clutch size is large for a Caspian Tern egg set in the southern United States (Clapp et al. 1983). Ed Court on occasion innocently accepted egg set data collected by a second party for him. These were usually for rarer species and some were apparently either misidentified or had incorrect data slips (McNair unpubl.; L. Kiff, pers. comm.).

A Captain Roberts collected a set of two eggs at Bull's Bay on 26 June 1905 (ROM). The eggs are those of the Caspian Tern (R. D. James, in litt.). On the same day, Roberts collected one clutch of Royal Tern eggs, the only other egg set collected by him in South Carolina. A. A. Wood of Ontario purchased both egg sets from Roberts. The information on nest site choice on the Caspian Tern egg data slip agrees with that from other areas: in North Carolina they nest on the edge of Royal Tern colonies (Parnell and Soots 1976). An A. T. Roberts collected five egg sets of the Royal Tern for M. T. Cleckley at Bull's Island on 1 June 1895. The eggs are those of Royal Terns (WFVZ; L. Kiff, pers. comm.), but this species has never nested at Bull's Island. Four clutches are of three eggs and the remaining clutch is of four eggs, which is highly unlikely. However, the relationship of Captain Roberts to A. T. Roberts is unknown, and thus the suspect data for the Royal Tern cannot be logically attributed to data for the Caspian Tern.

Georgia.—The only egg set of the Caspian Tern purportedly collected in Georgia was taken by J. E. Gould at Little St. Simons Island on 10 July 1900 (Johnston 1989). However, that single egg has been reidentified as an egg of the Royal Tern (Ch. M.; pers. exam.).

Conclusion.—All pre-1970 records of the Caspian Tern from the coast of South Carolina and Georgia, except for one unconfirmed record at Bull's Bay, South Carolina in 1905, are probably invalid. Considering all available information about oological collecting activities of Caspian Tern egg sets during this period, I do not believe that the validity of the Caspian Tern egg set collected by Captain Roberts has been resolved. The only unquestionably authentic breeding records I know of from Georgia or South Carolina were at Cape Island, Cape Romain NWR, South Carolina from 1970–74 (McDaniel and Beckett 1971; see McNair and Post 1993). These confirmed nests of Caspian Tern were located within Gull-billed Tern (*S. nilotica*) and Black Skimmer (*Rynchops niger*) colonies.

Acknowledgments: I thank L. Kiff of the Western Foundation of Vertebrate Zoology, R. D. James of the Royal Ontario Museum, and W. Post of the Charleston Museum for sending me egg data slips of Caspian Terns from South Carolina and Georgia. L. Kiff, R. W. Loftin and W. Post reviewed this note.

## LITERATURE CITED

Clapp, R. B., D. Morgan-Jacobs, and R. C. Banks. 1983. Marine birds of the Southeastern United States and Gulf of Mexico. Part III. Charadriiformes. U. S. Fish Wildl. Serv., Off. Biol. Serv., Wash., D.C. FWS/OBS-83/30. 853 pp.

Johnston, D. W. 1989. Joseph Edward Gould - early Georgia oologist. Oriole 54:17–34.

McDaniel, T. H., and T. A. Beckett, III. 1971. Caspian Tern nesting in South Carolina. Chat 35:39–41.
McNair, D. B., and W. Post. 1993. Supplement to Status and Distribution of SC Birds. Charleston Mus. Ornithol. Contrib. No. 8.
Parnell, J. F., and R. F. Soots. 1976. Caspian Tern nesting in North Carolina. Chat 40:14–15.

## Evasive Maneuvers of Black-capped Petrel (*Pterodroma hasitata*)

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On 30 August 1992, H. Fenton Day III and I observed a group of 25 distant birds soaring at heights 50-80 meters over the ocean, near "the Point" (35° 33' N, 74° 53' W), east-southeast of Oregon Inlet, North Carolina. From a distance of roughly a half-kilometer, the birds seemed to be gulls soaring together in a tight, ascending column. The time of initial observation was 1245 EDT; it was a hot day with moderate winds (5-10 knots), with good conditions for the formation of thermals over the Gulf Stream, and soaring gulls, if a little out of place, seemed plausible.

As the *Country Girl* neared the birds, it became apparent that they were Black-capped Petrels, with white collars and rumps visible on some of the lower birds. What had seemed lazy spirals in the air from a distance became rapid, precision-climbing from a closer vantage of 150 meters. The reason for this behavior also became apparent: an intermediate-morph South Polar Skua (*Catharacta maccormicki*) had begun a series of upward sallies at the lower petrels. Presumably this bird, possibly the same individual reported for several weeks in this vicinity (Allan Foreman, pers. comm.), was the cause of this unusual flight behavior in the petrels. The skua made five upward passes at the petrels without any apparent gain; the petrels simply ascended too rapidly for the skua. In one instance, the skua reached a petrel from below, perhaps 50 meters above the ocean. The petrel simply folded its wings in a drop resembling the stoop of a large falcon and returned to the locomotion more typical of a gadfly petrel after pulling out of the drop virtually instantaneously. The skua was left behind. At no time did the petrels exhibit aggressive behavior, such as mobbing, toward the skua.

It is not immediately obvious why a skua would harass a *Pterodroma* petrel: such behavior may be kleptoparasitic or predatory. In addition to predation on birds in their size class, skuas have been known to kill procellarids that did not disgorge (Furness 1987); predatory behavior cannot be ruled out in this case. On 14 August 1993, within a km of the present sighting, Alan Brady photographed an intermediate-morph South Polar Skua eating a Black-capped Petrel. It was not clear whether the skua had killed the petrel or whether the petrel was already dead.

My limited experience with Great (*C. skua*) and South Polar Skuas suggests that kleptoparasitic attacks are mounted most frequently from *above*, with

skuas often driving birds down onto the ocean's surface, perhaps because regurgitant is more easily recovered there. This is supported in the literature on skua kleptoparasitism and attack strategies. Nelson (1979) notes that whereas Parasitic Jaeger (*Stercorarius arctica*) "relies upon its great ability to out-fly its victim on level terms," the Great Skua will "circle above potential victims and then surprise them by stooping at great speed." The same appears true of South Polar and other southern skuas (Parmelee 1980, Furness 1987), and one finds many accounts of skuas forcing Northern Gannets (*Morus bassanus*) and various albatrosses to the water by riding them down and/or pushing with the feet. Brown Skuas (*Catharacta skua/antarctica lönnbergi*) regularly stoop and topple adult humans who enter their nesting territory. (Undoubtedly the most dramatic account of a skua stoop is that of F. St. Mars, excerpted in Bent [1921], who describes a violent encounter between an adult Golden Eagle and a pair of Great Skuas in Scotland, in which a skua attaches itself to the back of the eagle, forcing a plummet of over one hundred meters.) On 9 August 1993, I watched an adult light-morph Parasitic Jaeger pursue a Black-capped Petrel at 35° 25' N, 74° 36' W. The attack consisted entirely of swoops from below, which the petrel avoided by means of rapid, twisting acrobatics combined with high, dynamic arcs. The jaeger broke off the attack without success after one minute.

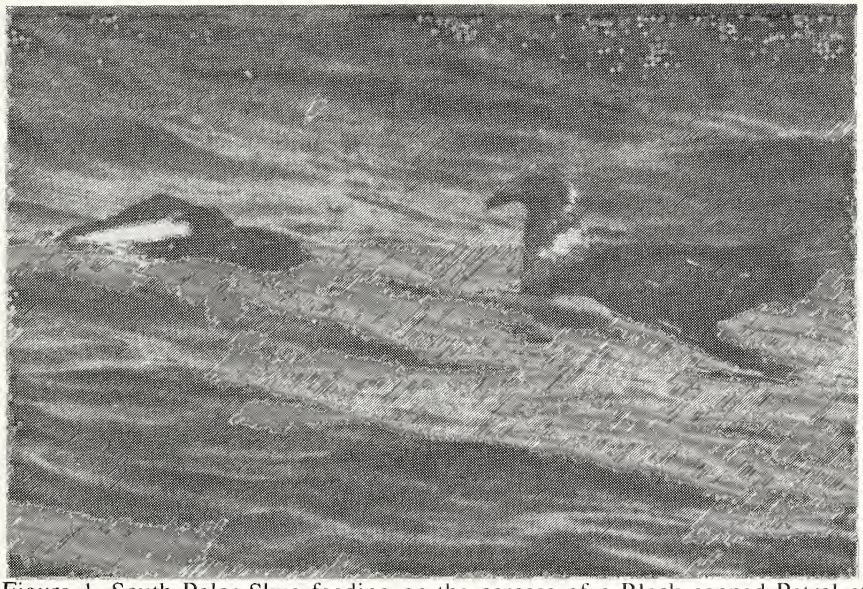


Figure 1. South Polar Skua feeding on the carcass of a Black-capped Petrel at 35°30'N, 74°49'W on 14 August 1993. Photo by Alan Brady.

It is conceivable that, in response to this stooping strategy in skuas, Black-capped Petrels have developed a primary evasive maneuver of ascent rather than a speed-based aerial escape tactic (see Lima 1993), which may be less effective, given the comparable swiftness of *Catharacta* and that genus's tendency to stoop from above. The petrels' tight column could have been an example of what Lima terms socially-coordinated escape. It is interesting to note,

in light of Furness's evidence that kleptoparasitic pursuit in jaegers is more successful when the host is high-flying, that the Black-capped Petrel observed on 9 August 1993 responded differently to an attack of *Stercorarius*: with lower altitude evasive maneuvers rather than soaring.

I have only rarely seen other procellarids successfully outmaneuver a skua, and never in aerial ascent. Few people have seen Black-capped Petrels engaged in high-altitude soaring. Haney (1987) notes: "Gull-like soaring on horizontal wings from 50-100 m above the ocean surface was observed rarely during moderate wind conditions (6-15 knots)." It is not clear whether the petrels we observed had been soaring prior to or in response to the attack of the skua, but their behavior during the observation strongly suggested its efficacy as an escape tactic. The only instances of interspecific aggression involving Black-capped Petrel known to me involve a Bridled Tern (*Sterna anaethetus*) attacking a Black-capped Petrel on 10 October 1978 off Hatteras, North Carolina , in which the petrel displayed erratic evasive maneuvers 5-10 m. above the ocean as it tried to feed (David Lee, pers. comm.), and a Cory's Shearwater causing a Black-capped Petrel to drop a small fish (Todd Hass, pers. comm.). Interspecific piracy among *Sterna* is an uncommon but occasionally observed behavior (Nelson 1979); terns are more frequently the victim in piratic pursuit. Aerial ascent and soaring is commonly observed in *Pterodroma* engaged in display flight or on return to the nesting area, but King and Reimer (1991) are alone in describing a rapid, tight ascent in a *Pterodroma*. David B. Wingate (pers. comm.) has observed spirally aerial ascents in the nocturnal courtship of Bermuda Petrels (*Pterodroma cahow*), but these displatys involve rather wider circles.

I am not able to find references in the literature available to me on interspecific interaction between skuas (*Catharacta* spp.) and Black-capped Petrels. Haney (1987) rarely found the two in association during his research cruises. Likewise, I am unable to find reference to this evasive maneuver in *Pterodroma*; Lima's exhaustive compendium of escape tactics makes no reference to tubenoses. The ability to ascend rapidly in tight circles is associated in my experience solely with Gyrfalcon (*Falco rusticolus*); despite the petrel's reputation for speed and agility, such a tactic was unexpected. The day was a particularly good one for Black-capped Petrels: at least 128 birds were seen along the transect. My thanks to OBServ Tours and Focus On Nature Tours, to Robert Odear and Armas Hill, for the opportunities to participate in their pelagic excursions, and to David Lee and Todd Hass, who reviewed this note and made suggestions for revision. Thanks also to Alan Brady for supplying the photograph in Figure 1.

## Literature Cited

Bent, A. C. 1921. Life Histories of North American Gulls and Terns. New York. Dover. 337 pp. + plates.

Furness, R. W. 1987. The Skuas. Staffordshire. T & A D Poyser. 336 pp.

Haney, J. C. 1987. "Aspects of the pelagic ecology and behavior of the Black-capped Petrel." Wilson Bull. 99.2: 153-168.

King, B. R. and D. S. Reimer. 1991. "Breeding and behavior of the Herald Petrel on Raine Island, Queensland." Emu 91.2: 122-125.

Lima, Steven L. 1993. "Ecological and evolutionary perspectives on escape from predatory attack: a survey of North American birds." Wilson Bull. 105.1: 1-47.
Nelson, J. B. 1979. Seabirds: Their Biology and Ecology. New York. A & W. 224 pp.
Parmelee, D. F. 1980. Bird Island in Antarctic Waters. Minneapolis. Univ. of Minnesota Press. 140 pp.

## BRIEFS FOR THE FILES

HARRY E. LeGRAND JR.

(All dates Winter 1992–93 [December to March] unless otherwise indicated; CBC = Christmas Bird Count)

RED-THROATED LOON: The sole inland report was one seen by Steve Dinsmore at Jordan Lake in Chatham County, N.C., on 16 February.

HORNED GREBE: A good local count of 40+ was made by Gene Howe at Goldsboro, N.C., on 14 December.

RED-NECKED GREBE: The only winter reports, surprisingly, came from inland locales — at Lake Townsend near Greensboro, N.C., from 3 January to the end of February (Herb Hendrickson et al.), and at Jordan Lake, N.C., from 7 to 14 February (Haven Wiley, Jeff Hole, et al.).

EARED GREBE: There was an excellent flurry of sightings from the Carolinas, all from inland sites. In North Carolina, single birds were seen at Lake Wheeler near Raleigh from 6 December to 7 February (Steve Dinsmore, Jeremy Nance, et al.), at Lake Mattamuskeet from December to 15 January (Nance, Dinsmore, et al.), at Goldsboro on 24 December (Eric Dean), at Lake Townsend near Greensboro from 4 to 18 January (Henry Link, Herb Hendrickson), and at Jordan Lake on 7 February (Haven Wiley, Jeff Hole). In South Carolina, one was seen on a pond in Columbia on 19 December by Lex Glover and party, and an outstanding six birds were seen on a pond at Sumter on 11 February by Lex Glover and Evelyn Dabbs.

NORTHERN GANNET: John Fussell observed six gannets over Bogue Sound between Morehead City and Atlantic Beach, N.C., on 6 January; and he saw another bird between Pivers Island and Radio Island, in that same vicinity, on 8 January. Two gannets were likewise rare away from the ocean over Pamlico Sound at Middletown, N.C., on 31 December (Harry LeGrand).

AMERICAN WHITE PELICAN: Two were observed by Steve Dinsmore at the Cape Fear River near Fort Fisher, N.C., on 3 January; and Henry Haberyan observed four at Cedar Point in Carteret County, N.C., on 21 January. The only winter report for South Carolina was one seen between Harbor Island and Hunting Island on 3 January (Jack Cooper) and 31 January (Robin Carter, Caroline Eastman).

BROWN PELICAN: Veronica Pantelidis reported that up to 11 pelicans were present at several sites in the Greenville, N.C., area from 28 January to the end of February. Even farther inland was a pelican seen on 6 January at Forest Lake in Fayetteville, N.C., by Philip Crutchfield.

GREAT CORMORANT: Two immatures were observed perching on channel markers on 21 December near New Bern, N.C., a somewhat inland record for the species (Rich Boyd, Wade Fuller).

AMERICAN BITTERN: Always a good find inland in winter, one was seen by Frank Enders in a marsh at Kehukee Swamp in southern Halifax County, N.C., on 14 January.

GREAT BLUE HERON: Normally uncommon in winter in the mountains, counts of 20 on 8 January and 26 on 10 January, near Calvert in Transylvania County, N.C. (Rebekah and John Huggins), were quite a surprise.

GREAT EGRET: One was notable on the Tryon, N.C., CBC on 19 December (Pat Wilkison, Jo Ann Martin). Others rare inland in North Carolina were near Raleigh on 16 December (Jeremy Nance), near that city on 18 and 19 December (Robert Hader), near Greensboro on 19 December (Carolyn Allen party), and at Goldsboro on 9 January (Eric Dean).

CATTLE EGRET: An excellent winter total for South Carolina was a tally of about 30 birds flying to a roost at dusk over the Port Royal Boardwalk Park in Beaufort County on 31 January (Robin Carter, Caroline Eastman).

GREEN-BACKED HERON: Will Cook and Julia Shields saw one at Lake Wheeler near Raleigh on 9 January and again on 28 February. The only other winter report inland was near Pactolus, Pitt County, N.C., where one was noted on 3 January by Frank Enders.

GLOSSY IBIS: Generally rare in South Carolina in winter, a count of 40 birds at Savannah NWR on 19 February (Anne and Vernon Waters) was an excellent report.

FULVOUS WHISTLING-DUCK: Always an exciting find, one was seen at a flooded sand pit east of Rocky Mount, N.C., on 22 December by Frank Enders and a few days later by Ricky Davis.

TUNDRA SWAN: This species is wintering farther inland with each passing year. Good totals for the western coastal plain were 21 at Goldsboro on 19 December (John Fussell) and 15 near Fayetteville on 2 January (Philip Crutchfield et al.). In the piedmont, one was observed near Cliffside, Rutherford County, N.C., on 11 December (Fred Weisbecker); and two were seen at Lake Crabtree, Wake County, N.C., on 4 January (Doug Shadwick).

GREATER WHITE-FRONTED GOOSE: The only Carolina report for the winter was of two birds seen from 24 November (Billy Dukes) to 21 December (Stuart Reitz) at Clemson, S.C.

SNOW GOOSE: Single blue-phase geese were seen away from the wintering range at Occoneechee Neck in Northampton County, N.C., on 27 December by Harry LeGrand, and at Lake Crabtree on 27 January by Robert Hader and John Huggins. A white-phase goose was equally rare on Lake Keowee at Seneca, S.C., from early December to early January, as noted by Jane and Roger P. McNeill.

GREEN-WINGED (EURASIAN) TEAL: A male of this subspecies was observed by Steve Dinsmore on a pond at Cape Hatteras, N.C., on 13 January. Another male was seen at Lake Mattamuskeet on 31 December (fide Allen Bryan).

NORTHERN PINTAIL: A few individuals overwinter away from the coast, but locally rare were one pintail at Kerr Scott Reservoir in Wilkes County, N.C., on 25 December (Simon Thompson), and one to two in Brevard, N.C., on several dates from 24 December into February (Betty McIlwain, Norma Siebenheller).

BLUE-WINGED TEAL: Two were seen in flight along the Cape Fear River in Raven Rock SP, N.C., on 19 December by John Bumgarner, and one was seen at a farm pond on the Jordan Lake CBC, N.C., on 3 January by Pat Coin, Carol Tingley, and Barbara Roth. Just as unusual in inland South Carolina were two seen at Townville, S.C., on 31 January by Steve Wagner and party.

NORTHERN SHOVELER: Notable in central North Carolina in winter were two seen at Jordan Lake on 3 January (Tom Howard, Anne Maker), five seen at Lake Wheeler near Raleigh on 16 January (Harry LeGrand), and one seen at Fayetteville on 7 February (Philip Crutchfield).

GADWALL: Rare in winter in the mountains, two were notable at Roaring Gap, N.C., on 2 January (fide James Coman).

EURASIAN WIGEON: As usual, a few males were observed along the North Carolina coast in winter. At North Pond on Pea Island, two were seen by Jeremy Nance on 5 December, with one being seen by many observers through 21 February (Gene Howe et al.). Steve Dinsmore saw one near Davis on 11 February and two more in the Ocracoke Inlet - Portsmouth Island vicinity on the same date.

REDHEAD: Rare for the southern mountains of North Carolina were two males seen in mid-February by Norma Siebenheller at Brevard.

GREATER SCAUP: Rare inland in winter were single males reported on 2 January at Santee NWR, S.C., by Nathan Dias, and on 9 January near Raleigh by Will Cook and Julia Shields.

COMMON EIDER: Along the North Carolina coast, Ralph Widrig observed a female Common at Fort Fisher on 1 December, Ricky Davis saw six birds at Oregon Inlet on 7 February, and Davis saw another bird at Whalebone on 20 February. The only South Carolina report for Common Eider was of a female seen by Lex Glover at the jetty at Huntington Beach SP on 30 December. No winter reports of King Eiders were received..

HARLEQUIN DUCK: The sole observation of the winter was an immature male seen under a pier at Atlantic Beach, N.C., from 6 to 13 December by Eric Dean and John Fussell.

OLDSQUAW: Always notable inland, two oldsquaws were observed by Eric Dean at the Goldsboro sewage treatment ponds from 13 to 24 December.

SURF SCOTER: Very rare inland were a female seen at a farm pond south of Raleigh on 19 and 20 December by Robert Hader and Jim Mulholland, two immatures seen at Jordan Lake on 3 January by the Henry Link party, and one seen at that lake on 2 February by Steve Dinsmore.

WHITE-WINGED SCOTER: Roger McNeill noted one on a pond in Columbia, S.C., on 3 January for an excellent inland report.

COMMON GOLDENEYE: In addition to a few inland reports in North Carolina, a total of three goldeneyes was notable inland in South Carolina at Santee NWR, as seen by Nathan Dias on 2 January.

COMMON MERGANSER: Tim Kalbach and Steve Swaby had a good count of six birds, all females, on Lake Greenwood, S.C., on 4 January. In North Carolina, three were seen on Jordan Lake on 3 January by the Jim Keighton party, one was seen near the Raleigh-Durham Airport on 4 January by Doug Shadwick and on 28 February by Roger McNeill and Henry Link, and one was seen at Lake Norman on 6 March by Taylor Piephoff.

RED-BREASTED MERGANSER: Steve Dinsmore and Jeremy Nance had an excellent count of 20,000+ mergansers at Cape Hatteras point, N.C., on 20 February..

OSPREY: Good winter reports inland were of single birds seen on 12 December at Goldsboro by Eric Dean and at the Jordan Lake dam on 3 January by Norm Budnitz and Mike Schultz.

NORTHERN GOSHAWK: This elusive species was observed on three occasions in the mountains of North Carolina during the winter and early spring. James Coman noted one at Piney Creek in Alleghany County on scattered dates in December and early January, and he saw another near Roaring Gap on a CBC on 2 January; both were adult birds. Porge Buck observed an adult perched in her yard in Black Mountain on 2 April 1993.

ROUGH-LEGGED HAWK: The only convincing report of the winter was of an adult in light phase seen overhead near Aurora, N.C., on 25 February by Sam Cooper and Kevin Markham.

GOLDEN EAGLE: An immature was seen on 26 January at the Yawkey Wildlife Center in Georgetown County, S.C., by Lex Glover. Likely the same bird was seen on 10 March at the Santee Coastal Reserve in adjacent Charleston County by Nathan Dias and party. The only report from North Carolina was an immature seen at Piney Creek in Alleghany County on 30 March by James Coman..

MERLIN: Two were rare in the mountains near Calvert, Transylvania County, N.C., on 10 January (John and Rebekah Huggins). Single Merlins also harassed feeder birds in northwestern Forsyth County, N.C., on 7 January (Barbara Page, Charles Frost) and in the southeastern part of that county from 17 to 23 January (Zack Bynum). Other inland sightings were of single birds in the Sandhills Game Land, Richmond County, N.C., on 26 December (Bruce Sorrie), and at Goat Island, Clarendon County, S.C., on 4 January (Lex Glover).

YELLOW RAIL: As usual, the only winter record was one heard calling in response to rock clicking near Santee NWR; Robin Carter and Caroline Eastman heard the bird on 2 January.

BLACK RAIL: Most unusual, especially away from the immediate coast in winter, was one seen walking across a path in a cattail marsh near Aurora, N.C., on 27 January by Sandy Smith. Several birders again reported the species in the Wanchese, N.C., area in late December, a regular year-round locale for Black Rail.

KING RAIL: Frank Enders noted an excellent five birds at Kehukee Swamp in southern Halifax County on 14 January. Also at this marsh, Enders saw or heard two Virginia Rails and a Sora on the same date.

PURPLE GALLINULE: Seldom reported in winter in the Carolinas, a recently dead gallinule was found on 3 January at Fort Fisher by Ricky Davis and others. It had been dead for at most a few days.

LESSER GOLDEN-PLOVER: The individual that lingered into late fall at the Cape Hatteras point campground, N.C., was seen throughout December and was last reported on 9 January by Kevin Hennings.

SNOWY PLOVER: The individual seen during the winter of 1992 at North Island, S.C., was seen again this winter, being observed by Mark Spinks in mid-January and by Lex Glover on 27 January..

WILSON'S PLOVER: A remarkable winter count of 21 Wilson's Plovers was made by Tony Leukering and Paul Sykes on the ACE Basin CBC, S.C., on 3 January. Two Wilson's were seen on 9 February at Harbor Island in that state by Lex Glover and Tom Murphy. In North Carolina, at least one wintered at Bird Shoal near Beaufort (John Fussell et al.), and one was seen on 23 January and 12 February at New Drum Inlet by Steve Dinsmore.

GREATER YELLOWLEGS: Late individuals were seen inland on 19 December at Goldsboro by Russ Tyndall and on that date near Buies Creek, N.C., by Mary Stevens.

LESSER YELLOWLEGS: Rarer inland in winter than the preceding species, one was notable at a pond near Lillington, N.C., on 19 December (Tom Howard, Scott Hartley).

SPOTTED SANDPIPER: Tardy inland birds were seen at Goldsboro on 19 December by Russ Tyndall and at Oconee Point on Lake Hartwell, S.C., on 21 December by Sidney Gauthreaux and Peter Worthington. One seen at Hatteras village, N.C., on 30 December by George Armistead and party was a very rare winter record for the Outer Banks.

WHIMBREL: Along the North Carolina coast, Steve Dinsmore saw one on 3 January at Fort Fisher, one on 24 January at Portsmouth Island, and two on 13 February at Shackleford Banks; and Ralph Widrig saw two Whimbrels at Fort Fisher on 14 January. The only South Carolina winter report was of four birds at Port Royal Boardwalk Park in Beaufort County on 31 January (Robin Carter, Caroline Eastman).

LONG-BILLED CURLEW: Single birds were observed along the North Carolina coast at four sites during the winter: at Clam Shoal north of Hatteras on 30 December (Steve Dinsmore, Brian Patteson), at the east end of Shackleford Banks on 13 February (Dinsmore), at Bird Shoal near Beaufort on 20 December (Mike Hoekstra), and all winter at Fort Fisher (Ralph Widrig et al.).

RED KNOT: Excellent winter totals for North Carolina were 528 on 23 January and 572 on 11 February at Portsmouth Island, as tallied by Steve Dinsmore.

WESTERN SANDPIPER: Though at times a fairly common to common species along the coast in winter, a tally of 1400 on 22 January at Portsmouth Island (Steve Dinsmore) was remarkable.

PURPLE SANDPIPER: Very rare between Oregon Inlet and Beaufort Inlet was a Purple seen on the beach at Salvo, N.C., on 20 February by Jeremy Nance and Steve Dinsmore.

DUNLIN: Steve Dinsmore had a notable total of 8000+ Dunlins at Portsmouth Island from 22 to 24 January.

CURLEW SANDPIPER: Practically never seen in the United States in winter, one was observed on 22 January at Portsmouth Island by Steve Dinsmore. This was a banded individual that had been present there since July.

LONG-BILLED DOWITCHER: Excellent winter counts in North Carolina were 350 in a flooded field near Lake Mattamuskeet on 23 January (Ricky Davis), 75 on the Southport CBC on 3 January (fide Davis), and 16 on the Wilmington CBC on 19 December (Sam Cooper).

POMARINE JAEGER: Individuals were seen at two coastal locales on 13 March, during the "Storm of the Century" — inside Oregon Inlet to the west of the Bonner Bridge (Giff Beaton, Robert Raffel) and at Folly Beach, S.C. (Nathan Dias).

PARASITIC JAEGER: Unusual in Pamlico Sound, N.C., was a sub-adult seen at Clam Shoal north of Hatteras on 30 December by Steve Dinsmore and Brian Patteson. Dinsmore had a rare late-winter sighting of the species on 21 February at Cape Hatteras point.

LITTLE GULL: As usual, the winter reports were confined to the Outer Banks. One was seen at Oregon Inlet on 7 February by Ricky Davis, and the species was seen at Cape Hatteras point from 13 January to 21 February, with the peak being four individuals on the latter date (Steve Dinsmore, Jeremy Nance).

THAYER'S GULL: An adult was carefully observed at Cape Hatteras point on 30 December by John Wright and others, who also saw an immature at the same time and place. The adult was also seen on 19 February at this cape by Steve Dinsmore, John Fussell, and Jeremy Nance.

ICELAND GULL: This gull was observed at least six times during the winter, all near the North Carolina coast. A second-winter bird was seen by Suzanne Wrenn and Pat Moore on the beach north of Avon on 16 February, a first-winter bird was seen by Jeremy Nance and Steve Dinsmore on the beach at Frisco on 20 February, a first-winter bird was noted by Dinsmore on northern Core Banks on 12 February, a first-winter bird was seen by John Fussell and party near Newport from 29 January to 6 February, an adult was seen by Fussell and others near Newport on 6 February, and a second-winter bird was seen by Harry LeGrand at Caswell Beach on 3 January..

LESSER BLACK-BACKED GULL: The best total of this increasing species was an excellent 23 counted on the beach from Salvo to Cape Hatteras point on 20 February by Steve Dinsmore and Jeremy Nance. The peak count at the landfill near Newport was eight Lessers on 29 January, as noted by John Fussell and party. In South Carolina, where still a rare species, one was seen on 25 January and two were seen on 17 February at the Horry County landfill (Jack Peachey), one was seen at Otter Island in Colleton County on 11 January (Lex Glover, Tom Murphy), and probably this latter bird was seen on 12 January at Harbor Island (Glover, Murphy).

GLAUCOUS GULL: Two first-winter birds were noted by John Fussell, Jeremy Nance, and Steve Dinsmore on 29 January at the Newport landfill, and one immature was seen at Huntington Beach SP on 24 January by Nathan Dias. Seldom reported in the Carolinas was a Glaucous x Herring Gull hybrid, in first-winter plumage, observed at Cape Hatteras point on 19 February by Fussell, Nance, and Dinsmore.

BLACK-LEGGED KITTIWAKE: Four adults were notable from shore at Cape Hatteras point, in foggy weather, on 30 December (Harry Armistead party). Even more unusual were four adults in South Carolina, seen from the Folly Beach shore immediately after the storm on 13 March (Nathan Dias). Single birds were seen along the North Carolina coast at Shackleford Banks on 20 December (Roger McNeill), at Pea Island on 29 December (Harry LeGrand), at the Cape Hatteras point campground on 17 January (Eric Dean), at northern Core Banks on 22 January and 12 February (Steve Dinsmore), and found dead near the Cape Hatteras lighthouse on 21 February (Dinsmore, Jeremy Nance).

FORSTER'S TERN: At Goldsboro, two were seen on 19 December by Russ Tyndall, with singles seen there on 16 and 24 December by Eric Dean. Another Forster's was unusual in mid-winter at Brier Creek Reservoir in Wake County, N.C., on 7 February (Will Cook party).

BLACK SKIMMER: Three were slightly north of their usual winter range at Cape Hatteras point on 23 January, as seen by Joan Bartlett, Pat Moore, and others.

RAZORBILL: A noticeable late-winter flight reached the Carolina coast, highlighted by seven positively identified Razorbills, and seven others believed to be this species, at Cape Hatteras point on 21 February (Steve Dinsmore, Jeremy Nance). Marcia Lyons found about eight dead birds, all oiled, along beaches at Cape Hatteras NS during February, and three live birds were observed by Anson Cooke and Doug Shadwick at Oregon Inlet on 7 February. One was seen at Huntington Beach SP on 4 January by Ricky Davis, for a rare South Carolina report.

WHITE-WINGED DOVE: One was observed by Joe Hamilton on 1 February near the White Hall community in Colleton County, S.C. (fide John Cely).

COMMON GROUND-DOVE: Perry Nugent and party saw three doves in a peach orchard near Vance, S.C., on 2 January. The inland distribution and seasonal status of the species in South Carolina is poorly known.

SHORT-EARED OWL: The only inland report for the winter was of two owls seen at a Voice of America site in northwestern Beaufort County, N.C., on 14 February (Eric Dean). Ralph Widrig saw three in dunes at Fort Fisher on 22 January and 10 February, and one was seen at Huntington Beach SP on 5 December by Lex Glover, Glenn Smith, and party.

NORTHERN SAW-WHET OWL: One was heard giving the territorial cooing notes along Beech Swamp, Edgecombe County, N.C., on 22 December by Franz and Elisa Enders. The calls were apparently in response to an Eastern Screech-Owl taped call..

CHUCK-WILL'S-WIDOW: One was flushed from a thicket at Fort Fisher on 14 December by Ralph Widrig. [The winter status of this species is not well known, though a few individuals linger near the coast into early winter, if identifications are correct. — HEL.]

RUBY-THROATED HUMMINGBIRD: Of the two *Archilochus* hummingbirds at Sam Cooper's feeders in Wilmington all winter, one molted into a male-plumaged Ruby-throated by the end of winter; the other was a female of uncertain species. There were numerous winter reports from both Carolinas of *Archilochus* hummingbirds, including at least eight in the Beaufort - Morehead City area in North Carolina. [Because of the large number of such winter records, unidentified to a particular species, I find little value in publishing specific records, at least for this season. During the winter of 1992-93 in Georgia, observers and hummingbird banders documented a remarkable six species of hummingbirds, none of which was a Ruby-throated! Several of these species could only be identified in the hand by the banders, after carefully measuring the birds. Unfortunately, in the Carolinas there is not the open and friendly cooperation among backyard birdwatchers (with hummingbird feeders), birders, and hummingbird banders. As a consequence, nearly all of these winter hummingbirds go undocumented as to what species are involved. Georgia now has four records of Black-chinned Hummingbird, and I suspect some of our winter *Archilochus* hummingbirds are of this species. Likewise, Georgia also had first records for Allen's Hummingbird, Anna's Hummingbird, and Broad-tailed Hummingbird during the winter. Several of these would not have been conclusively identified without the cooperation of the banders and the people who maintain the feeders. — HEL.]

RUFOUS HUMMINGBIRD: The adult male present at Montie Cox's feeder southwest of Raleigh during the fall lingered through the winter, with the last report being on 2 February (Steve Dinsmore, Jeremy Nance). A *Selasphorus* hummingbird of unknown identity was seen at a feeder in Wake Forest, N.C., from the fall until the second week of December (Roger McNeill).

*MYIARCHUS* FLYCATCHER sp.: Bruce Sorrie observed a possible Brown-crested Flycatcher at Fort Bragg, N.C., on 1 January. [The details are certainly that of either Great Crested Flycatcher, reported only several previous times in the state in winter, or Brown-crested Flycatcher. The observer reported the bird as a "possible Brown-crested"; this species has never been previously reported from the Carolinas. The record has been submitted to the N.C. Bird Records Committee for a vote. — HEL.]

WESTERN KINGBIRD: One was seen in the Buxton - Cape Hatteras area on 4 December by Frank Enders and on 6 December by Joan Bartlett, Keith Andre, Diane Andre, and Pat Moore. Another bird was very late on 1 January at Pea Island, as seen by Rick Knight.

HORNED LARK: Very rare on the Outer Banks was a lark seen on the lawn in front of the Cape Hatteras visitor center at Buxton on 14 February (Diane Andre, Keith Andre, Pat Moore).

TREE SWALLOW: A count of 8000+ was notable at Cape Lookout, N.C., on 13 February (Steve Dinsmore).

BARN SWALLOW: An excellent total of four birds was seen on 21 December at New Bern by Russ Tyndall, Bob Holmes, and others. Another individual was noted on 29 December at Pea Island by Jeremy Nance, Ken Knapp, and Bill Portlock. An early migrant was seen by Kevin Hennings on 20 February at Bear Island WMA, S.C.

COMMON RAVEN: A probable first record for Guilford County, N.C., was a pair of ravens, apparently showing courtship behavior, observed over a quarry in Stokesdale on 22 February by Henry Link. [This species has recently been reported nesting in quarries in neighboring Forsyth and Rockingham counties; thus, the ravens might also be nesting in Guilford County. — HEL.]

SEDGE WREN: The only far inland winter report was of an excellent five wrens noted by Frank Enders at Kehukee Swamp in Halifax County on 14 January.

MARSH WREN: Frank Enders noted two birds at Kehukee Swamp in southern Halifax County on 14 January. [Enders' reporting of six marsh species — three rails, a bittern, and two wrens — at this far inland site indicates that many marsh birds attempt to overwinter well away from the coast; most of these species are not overly surprising on inland CBC's, but there are very few observations in February or March to indicate successful overwintering of these birds. — HEL.]

BLUE-GRAY GNATCATCHER: This species is increasing as a winter visitor in the Carolinas, with numerous CBC reports. Notable after December were single birds near Iva, S.C., on 1 January (Bob Wood), at Fayetteville on 5 January (Philip Crutchfield, Tim Playforth), at Beaufort, N.C., on 14 January (John Fussell), and at New Bern on 17 January (Bob Holmes).

SPRAGUE'S PIPIT: One was seen and heard, being flushed from 3- to 6-inch grasses, at the Orangeburg, S.C., sod farm on 20 February by Harrol Blevins and party. The single-note call and other field marks were described by Blevins.

LOGGERHEAD SHRIKE: Notable at any season in the mountains were two seen in the Piney Creek, N.C., area during the winter (James Coman) and one seen between Rosman and Brevard on 21 January (Betty McIlwain). Another shrike was seen at Carolina Beach SP, N.C., on 21 January by Ralph Widrig.

WHITE-EYED VIREO: Rare in the piedmont in winter were single vireos seen by Bob Wood in Abbeville County, S.C., on 1 January and by Robert Hader at Raleigh on 9 February.

ORANGE-CROWNED WARBLER: This species, along with the Solitary Vireo and Blue-gray Gnatcatcher, is wintering in greater numbers and farther inland than during previous winters. An excellent count of six was made on the Goldsboro CBC on 19 December (fide Eric Dean), one was seen at Fayetteville on 31 January and 6 February (Philip Crutchfield), one was seen by Frank Enders in southern Halifax County on 14 January, and one banded a year ago by Evelyn Dabbs near Mayesville, S.C., returned this winter to her yard.

NASHVILLE WARBLER: David Leake banded single Nashvilles at Kitty Hawk, N.C., on 6 and 12 October and 1 November 1992.

NORTHERN PARULA: Very rare in winter was one observed on the Southport, N.C., CBC on 3 January (Ricky Davis).

YELLOW WARBLER: Only a few winter records exist for the species for the Carolinas; thus, notable were a female seen at Goldsboro on 17 December by Gene Howe and a male seen in weed piles at Beaufort, N.C., by John Fussell and others from 17 to 20 December.

CAPE MAY WARBLER: Harry LeGrand observed an adult male at Buxton on 30 December, and Roger McNeill saw an immature at that town also on 30 December. Vernon Waters saw another Cape May on 17 December at the Savannah River Site, S.C., and Simon Thompson observed one on 1 and 6 March at Tryon, N.C.

YELLOW-THROATED WARBLER: One was noted at Greenville, N.C., on 18 December by Howard Vainright and another was seen at Morehead City on 8 and 23 December by John Fussell.

PRAIRIE WARBLER: Excellent numbers lingered farther north than usual during the winter, and it appears that the species is now wintering regularly along parts of the coast of both states. Nine birds were tallied on the Cape Hatteras CBC on 30 December (fide Harry LeGrand). Ricky Davis saw birds at Lake Mattamuskeet on 23 January and at Pea Island on 7 February; John Fussell saw one north of Beaufort, N.C., on 8 January; and Bob Holmes and Holly Reynolds saw another at New Bern on 17 January. One was noted at Bear Island WMA on 30 January by a Carolina Bird Club party.

BLACK-AND-WHITE WARBLER: Individuals were observed in Buxton Woods, N.C., on 2 January by Rick Knight and on 17 February by Betty Rahn. Gene Howe and party noted one at Goldsboro on 20 December, and he saw one at a different site at that town on 20 February.

AMERICAN REDSTART: William Kirksey provided good details of a female redstart present in his yard in Morganton, N.C., from 14 January to 24 February.

WATERTHRUSH sp.: Kent Fiala observed a waterthrush, which he believes was a Louisiana, on 27 and 29 December in Duke Forest, Durham County, N.C. [The thorough details are certainly that of a waterthrush, but the yellowish color of the underparts does not seem correct for Louisiana, even though the bird had a wide white eyestripe behind the eye. There are several winter records for Northern Waterthrush in North Carolina, but a winter record of Louisiana anywhere in the United States would be extremely noteworthy and should be subject to great scrutiny. — HEL.]

WILSON'S WARBLER: This rare species in the Carolinas has appeared frequently in previous winters, and this winter single males were seen at Hatteras village on 30 December (Chris Witt, Matt Sharp) and at Magnolia Gardens near Charleston on 28 February (Robin Carter, Caroline Eastman).

YELLOW-BREASTED CHAT: Single chats were found near the North Carolina coast at Pea Island on 29 December by Paul Sykes, at Fort Fisher on 13 January by Ralph Widrig, and at New Bern on 17 January by Bob Holmes and Holly Reynolds.

WESTERN TANAGER: Records of this species seem to have been very few in the Carolinas in the last decade, but males were reported at two coastal North Carolina sites during the winter. Kitty Kosh had one at her feeder in Wilmington nearly all winter, and one was seen by David Leake on 21 February at the home of Helen van Laer in Southern Shores. The latter bird, and apparently also a female of the species, had been seen by van Laer for about a week previous to 21 February.

INDIGO BUNTING: Steve Thomas observed a male in winter plumage at his feeder in Aynor, S.C., on 13 February and again on 13 March.

PAINTED BUNTING: Single birds, in "green" plumage (not adult males), were seen in Morehead City on 28 December (fide Roger McNeill) and at Kitty Hawk from 16 to 21 March (Robert and Joyce Hannan).

CLAY-COLORED SPARROW: Single individuals were encountered in eastern North Carolina at Shackleford Banks on 20 December (Roger McNeill), near Southport on 3 January (Sam Cooper), 10 miles northeast of Greenville on 3 January (Frank Enders), and west of Lake Phelps on 23 January (Ricky Davis).

VESPER SPARROW: Locally rare were one seen near Derby in Richmond County, N.C., on 26 December (Bruce Sorrie) and two seen about 10 miles northeast of Greenville, N.C., on 3 January (Frank Enders).

LARK SPARROW: Good finds were single birds seen on 2 December near Carolina Beach, N.C. (Ralph Widrig), on 28 December near Eastover, S.C. (Nathan Dias), and on 30 December at Cape Hatteras point (Jeremy Nance, Roger McNeill).

SAVANNAH (IPSWICH) SPARROW: Robin Carter and Caroline Eastman observed one of this subspecies in dunes at Huntington Beach SP on 16 January.

GRASSHOPPER SPARROW: Ricky Davis noted one near Rocky Mount, N.C., on 17 January, for the only winter report.

HENSLOW'S SPARROW: This species winters amid the wiregrass in pine savannas, but few people attempt to find them at that season. Sam Cooper flushed one at Big Island Savanna in the Green Swamp of Brunswick County, N.C., on 7 February.

LE CONTE'S SPARROW: The only winter report was one seen at the Barnwell, S.C., airport in late December by Tim Kalbach.

LINCOLN'S SPARROW: Derb Carter observed an excellent three Lincoln's near Goldsboro on 19 December. Two were noted by Frank Enders near the Tar River east of Rocky Mount on 22 December. Single birds were seen near Frisco, N.C., on 30 December by Jeremy Nance and in Aynor, S.C., on 13 March by Steve Thomas.

WHITE-CROWNED SPARROW: A notable tally of 40 to 45 White-crowneds wintered in the Winston-Salem area, with 18 being banded by Jackie Spencer (fide Ramona Snavely). Another excellent count was 22 on 2 February in the River Road section of Cumberland County, N.C. (Philip Crutchfield, Hal Broadfoot). Two were rare south of Summerton, S.C., on 2 January (Robin Carter).

DARK-EYED (OREGON) JUNCO: An individual of this subspecies was reported in western Forsyth County, N.C., on 21 January (fide Ramona Snavely).

LAPLAND LONGSPUR: The species wintered at the Orangeburg sod farm, with reports from 9 to 28 February, with an outstanding count of 19 there on the latter date (Robin Carter). Three Laplands were noted by Sidney Gauthreaux and Peter Worthington near Townville, S.C., on 21 December; and one was observed at Fort Bragg, N.C., by Bruce Sorrie on 20 December.

SNOW BUNTING: Buntings were observed during the winter only along the North Carolina coast — at Oregon Inlet, Cape Hatteras point, Cape Lookout, and Beaufort. Counts in double figures were 18 at Cape Lookout on 13 February (Steve Dinsmore) and 10 at Beaufort on 14 January (John Fussell).

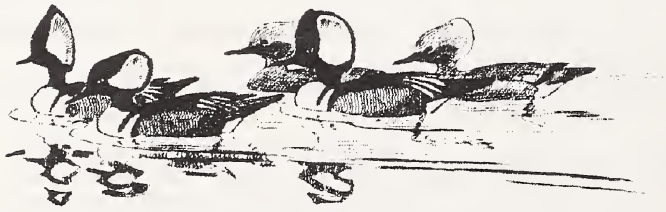
YELLOW-HEADED BLACKBIRD: The only winter report was a female seen in central Carteret County, N.C., on 29 January by Jeremy Nance.

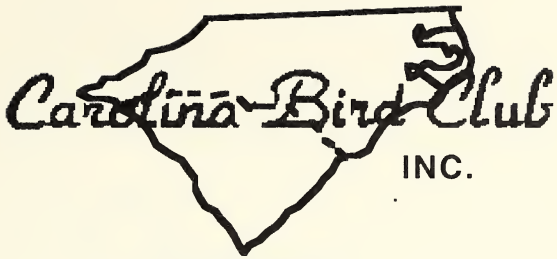
BREWER'S BLACKBIRD: At the established wintering grounds in central Carteret County, 20 Brewer's were observed by Steve Dinsmore, John Fussell, and Jeremy Nance on 29 January. Other winter reports were two seen near Goldsboro on 4 December (Eric Dean) and two seen at Santee NWR on 2 January (Robin Carter).

NORTHERN ORIOLE: Large numbers wintered in the Carolinas in the 1960's and 1970's, but numbers have declined in the past 10 to 15 years. However, this winter showed an increase in orioles, especially at feeders. Mary Stevens and others saw 23 at feeders in a yard in Lillington, N.C., on 19 December. Steve Thomas reported that at least eight wintered at the feeders of Mrs. Virgil Baker in Conway, S.C. Other good counts were six tallied on the Cape Hatteras CBC on 30 December (fide Harry LeGrand), and four seen at Magnolia Gardens near Charleston on 28 February (Robin Carter).

PURPLE FINCH: Despite the dwindling number of winter finches visiting the Carolinas in recent years, Bill Hilton Jr. managed to band 222 Purple Finches at York, S.C., over the winter. Nonetheless, he indicated that this total was only one-third the numbers he banded during "good" winters.

Winter reports (December through February, 1994) for Briefs for the Files should be sent to the "Briefs" editor (for address see front inside cover) by March 20, 1994.



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(USPS 101-020)

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Quarterly Bulletin of Carolina Bird Club, Inc.
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# The Chat

Vol. 58 SPRING 1994 No. 1

SMITHSONIAN

Quarterly Bulletin of Carolina Bird Club, Inc.
The Ornithological Society of the Carolinas

# THE CHAT

(USPS 101-020)
VOL. 58 SPRING 1994 NO. 2
Published by the Carolina Bird Club, Inc.

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THE CHAT (USPS 101-020) is published quarterly by the Carolina Bird Club, Inc., with headquarters at the North Carolina State Museum of Natural Sciences, 102 N. Salisbury Street, Raleigh, NC 27603 POSTMASTER: Send address changes to Carolina Bird Club, THE CHAT, P. O. Box 29555, Raleigh, N. C. 27626-0555.

PAGE CHARGES: Authors who have funds available for page charges are requested to remit same at the rate of $40.00 per page. CBC Headquarters will provide statements required for your business records.

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## Winter Distribution and Habitat Utilization of Piping Plovers in South Carolina

PHILIP M. WILKINSON and MARK SPINKS

The Piping Plover (*Charadrius melodus*), a migratory shorebird endemic to North America, has been protected under the Endangered Species Act since 1985 (USFWS 1985). This species breeds in three geographic regions: the Atlantic Coast from Maritime Canada to North Carolina (and recently in South Carolina, Murray and McDavit 1993); along rivers, alkali lakes and wetlands of the Northern Great Plains; and in northern Michigan (Haig and Plissner 1993). The Atlantic breeding population is believed to follow a narrow strip along the Atlantic Coast during spring and fall migrations (Dyer et al. 1987). In South Carolina, it is more common during the migrations (March-May and August-October) (Sprunt and Chamberlain 1970) and is rare in summer. Most atlantic breeding birds winter on the South Atlantic and along the Gulf Coast of the United States and Mexico. In winter, most individuals are found on ocean beaches and sand or algae flats in protected bays from the Carolinas to Yucatan, with a few occurrences being reported in the Caribbean Islands (Haig and Plissner 1993).

Historical information suggests that the Atlantic population has been decreasing since 1955 or earlier (Haig and Oring 1985). This trend was attributed to habitat loss and degradation, disturbance by humans and domestic animals, increased predation and water management practices (Haig et al. 1988, Dyer et al. 1987).

Historical information about the status of the Piping Plover population on its wintering grounds is sparse. Haig and Oring (1985) conducted the first two winter surveys, one which covered the Texas coastline in 1983 and the other, the Gulf Coast beaches from Mexico to Florida in 1984. These surveys represented the first field assessments of Piping Plover winter populations. Only 25% of the total breeding population was represented, and a significant portion of the winter range, including the Atlantic Coast, was not surveyed. In 1987–88, a total of 221 Piping Plovers were observed on the Atlantic Coast (14% of the Atlantic breeding population) and 1,508 were found on the Gulf Coast (56% of Great Lakes/Great Plains breeding population) (Nicholls and Baldassare 1990a).

Most of the Piping Plovers' life cycle is associated with wintering habitat. Because only a small percent of the Atlantic nesting Population has been found wintering along the Atlantic coast emphasizes the need to identify major winter sites. Nicholls and Baldassare (1990a) concluded that additional surveys were especially needed in South Carolina and Louisiana. During Nicholls' survey of South Carolina (1987–88), she found 41 Piping Plovers at 8 of 22 sites. Due to heterogeneity of the South Carolina coastline and the many coastal islands that create an array of microhabitats, prospects of more Piping Plovers being located in the region were good.

Our objective was to identify wintering sites of Piping Plovers along the South Carolina coast during 1990–93. We defined habitat characteristics of sites, determined the status of important wintering sites, and censused wintering Piping Plovers in South Carolina. Additional information on habitat

type, site ownership, and numbers of wintering Piping Plovers found at each site is documented/presented.

## CENSUS METHODS

Fifteen volunteers were assembled for assistance in censusing. Sites were surveyed initially based on records of previous Piping Plover sightings made by active birders, recent Christmas Bird Counts, and from preliminary surveys conducted in November-December of each year. Each census was conducted between 12–20 January 1990–93.

Counts were made near high tide when birds were concentrated on roosts. Most sites were accessed initially by boat and then surveyed by foot. Binoculars and telescopes were used to identify birds. Observers recorded the number and location of each Piping Plover seen. Surveyed areas that did not contain Piping Plovers were also noted. In January 1991, these surveys were coordinated with the International Piping Plover winter census, which included the Gulf Coast of the U.S. and Mexico, the southern Atlantic coast of the U.S., the coast of Cuba and several other Caribbean countries (Haig and Plissner 1993).

## RESULTS AND DISCUSSION

### COUNTS

A cumulative total of: 11 Piping Plovers was located at 6 sites in 1990, 51 at 8 sites in 1991, 51 at 6 sites in 1992, and 53 at 5 sites in 1993 (Table 1). Eleven of 35 sites surveyed were used by Piping Plovers at least once during the four years. Only Huntington Beach and North Island were used all four years. Except for 1990 (N=11), Piping Plover numbers were remarkably stable each January. The low number of wintering birds in 1990 may have been influenced by Hurricane Hugo, a category 4 hurricane that came ashore on the north central South Carolina coast in September 1989. Beach profiles surveyed before and after the hurricane showed that elevations had decreased by 1–1.5 m in some areas (Marsh and Wilkinson 1991). This may have affected Piping Plover food availability in those areas. In addition to potential effects caused by the hurricane, the temperature during December 1989 was below normal on 21 days and the minimum temperature was $\leq 0°C$ for 14 consecutive days. Further, coastal beaches were covered by $\geq 30$ cm snow in late December 1989 (Marsh and Wilkinson 1991).

In January 1991, a winter census was conducted at all known U.S. Piping Plover wintering sites and some other Gulf sites. This cooperative census resulted in the highest number (N=3451) of wintering Piping Plovers ever recorded (Haig and Plissner 1993). The majority of birds (55%) were found in Texas and Louisiana (22%) (Haig and Plissner 1993). In South Carolina, all potential Piping Plover wintering habitat was censused. This was the first thorough census of this species for the state. The number of Piping Plovers found probably represents the majority of wintering Piping Plovers in the state during January of those years.

Although the 1991 international census resulted in discovery of more wintering birds than had been previously reported, a large portion of the nesting population was not found in the winter census (Haig and Plissner 1993). The

Table 1. Results of the South Carolina Piping Plover Winter Survey: Jan. 1990–1993.

| Site | County | 1990 | 1991 | 1992 | 1993 | Previous Count | Sub-strate | Owner-ship |
|---|---|---|---|---|---|---|---|---|
| Waties Isl. | Horry | | 2 | 4 | 1 | | | St. |
| Huntington Beach | Georgetown | 3 | 6 | 8 | 6 | 12/1987 (1) | A/S/M | St. |
| Litchfield Beach | Georgetown | | | | | | | |
| North Isl.-N end | Georgetown | 1 | 7 | 6 | 6 | 12/1987 (1) | A/S/M | St. |
| Sand Isl. | Georgetown | | | | | | | |
| South Isl. | Georgetown | | | 1 | | | | St. |
| No. Santee Inlet | Georgetown | | | | | | | |
| Cedar Isl. | Georgetown | | | | | | | |
| Murphy Isl. | Charleston | | | | | | | |
| Cape Isl. | Charleston | | 3 | 7 | 8 | 3.1987 (1) | S/M | Fed. |
| Lighthouse Isl. | Charleston | 1 | | | | | | Fed. |
| Racoon Key | Charleston | | | | | | | |
| Bulls Bay | Charleston | | | | | | | |
| Bull Isl. | Charleston | | | | | | | |
| Prices Inlet | Charleston | | | | | | | |
| Capers Inlet | Charleston | | | | | | | |
| Dewees Inlet | Charleston | | | | | | | |
| Sullivan's Isl. | Charleston | 1 | | | | | S | Priv. |
| Bird Key Stono | Charleston | | | | | | | |
| Kiowah Isl. | Charleston | | | | | | | |
| Capt'n Sam's Inlet | Charleston | | | | | | | |
| Deveaux Bank | Charleston | | 20 | 25 | 26 | | A/S/M | St. |
| Botany Bay Isl. | Charleston | | | | | | | |
| Edingsville Bch | Charleston | | | | | | | |
| Otter Isl. Inlet | Colleton | | | | | | | |
| Harbor Isl. | Beaufort | 3 | 5 | | 6 | | S | |
| Hunting Isl. | Beaufort | | | | | 8/1987 (1) | S | St. |
| Fripp Inl. | Beaufort | | | | | | | |
| Fripp Isl. | Beaufort | | | | | | | |
| Skull Inlet | Beaufort | | | | | | | |
| Pritchards Inl. | Beaufort | | | | | | | |
| Little Caper's Isl. | Beaufort | | 2 | | | 3/1987 (1) | S | Priv. |
| Morse Creek | Beaufort | | | | | | | |
| Joyner Bank | Beaufort | | | | | | | |
| Hilton Head Isl. | Beaufort | 2 | 6 | | | 20/1984 (2) | S | Priv. |
| Annual Totals | | 11 | 51 | 51 | 53 | N/A | | |

(1) = Nicholls 1989 (2) = Christmas Bird Count 1984
A/S/M = Algae/Sand/Mud, S = Sand, S/M = Sand/Mud

largest discrepancy between nesting and wintering birds occurred in the Atlantic population. Only 11% of the Atlantic nesting population was accounted for in the 1991 winter census of the U.S. South Atlantic Coast and

the Caribbean (Haig and Plissner 1993). Additional surveys along the Atlantic coast are unlikely to resolve this large discrepancy. Genetic studies may reveal that a large portion of the Atlantic coast breeding population winters along the Gulf of Mexico (Sue Haig pers. comm.).

SITES

Deveaux Bank, located near the mouth of the North Edisto River, was the most important Piping Plover wintering site in South Carolina during 1991–1993. Forty-nine percent of the Piping Plovers surveyed in 1992 and 1993 were located there. Deveaux Bank washed away in 1979 following Hurricane David. The island gradually reformed approximately 1.5 km southeast of the 1979 site. In the mid 1980's, a large (≥ 25 hectare) sand/algae/mud tidal lagoon formed in association with the island that appeared to be suitable Piping Plover foraging habitat. Piping Plovers were not found wintering there until 1991 but, this may be due to inadequate surveys.

During winter distribution surveys on the Atlantic Coast (1986–1987), important habitat features affecting the presence of Piping Plovers were the proximity of large inlets associated with sand flats, sandy mud flats, and habitat heterogeneity. Also, Piping Plovers were most often found associated with other species of shorebirds or with other Piping Plovers (Nicholls and Baldasarre 1990b).

All eleven wintering sites found in South Carolina during our surveys, were adjacent to open, sandy beaches near inlets associated with shallow tidal lagoons. Four sites which had the largest shallow lagoons; Huntington Beach, North Island, Cape Island, and Deveaux Bank, had 71–90% of Piping Plovers located during 1991–1993. Substrates associated with these wintering sites included sand, algae/sand/mud, and sand/mud (Table 1). Huntington Beach and North Island were the most consistent wintering sites, while Hilton Head has shown the greatest decline, with no birds present in 1992 and 1993. Many areas where Piping Plovers were found are isolated or on state or federally protected land, which suggest that the critical factors presently affecting wintering Piping Plover distribution in South Carolina may not be related to human use. Huntington Beach, a site consistently used by wintering Piping Plovers, has high human use. This suggests that some human presence may not prevent use of a site by wintering birds.

Acknowledgments

These surveys and census were funded by a grant from the U.S. Fish and Wildlife Service and from the South Carolina check for Wildlife fund. We thank C. Marsh for support throughout the project and for reviewing the manuscript; T. Murphy for his assistance with surveys in the southern portion of the coast; S. Haig, W. Rhodes and 3 anonymous reviewers for reviewing the manuscript; and P. Murray for typing. We especially thank: W. Allen, J. Beatty, J. Coker, J. Davis, M. Dodd, G. Dugas, L. Glover, B. Haskins, S. Lareau, B. Lowes, P. Nugent, G. Simmons, C. Slusher, J. Wallace, B. Woodward whose help with the surveys was invaluable.

## LITERATURE CITED


Dyer, R.W., A. Hecht, C. Raithel, K. Terrwilliger, and S. Melvin. 1987. Atlantic Coast Piping Plover recovery plan. U.S. Fish & Wildlife Service, Newton Corner, MA. 77 pp.

Haig, S.M. 1992. Piping Plover. in Poole, A., P. Stettenheim II, and F. Gill, eds. The Birds of North America. No. 2. The Academy of Natural Sciences, Philadelphia; American Ornithologists' Union, Washington, D.C.

Haig, S.M. and L.W. Oring. 1985. Distribution and status of the Piping Plover throughout the annual cycle. J. Field Ornithol. 56:334–345.

Haig, S.M. and W. Harrison, R. Lock, L Pfannmuller, E. Pike, M. Ryan, and J. Sidle. 1988. Recovery plan for Piping Plovers of the Great Lakes and Northern Great Plains. U.S. Fish and Wildlife Service, Twin Cities, MN 160 pp.

Haig, S.M. and J.H. Plissner. 1993. Distribution and abundance of Piping Plovers: results and implications of the 1991 International census. Condor 95:145–156.

Marsh, C.P. and P.M. Wilkinson. 1991. The impact of Hurricane Hugo on coastal bird populations. J. Coastal Res. SI 8:327–334.

Murray, R. and M.W. McDavit. 1993. First nesting records of Piping Plover in South Carolina. Chat 57:10–11.

Nicholls, J.L. 1989. Distribution and other ecological aspects of Piping Plovers (Charadrius melodus) wintering along the Atlantic and Gulf Coasts. M.S. thesis, auburn Univ., Auburn, Alabama

Nicholls, J.L. and G.A. Baldasarre. 1990a. Winter distribution of Piping Plovers along the Gulf and Atlantic Coast of the U.S. Wilson Bull. 102:400–412.

Nicholls, J.L. and G.A. Baldasarre. 1990b. Habitat selection and interspecific associations of Piping Plovers wintering in the United States. Wilson Bull. 102:581–590.

Sprunt, A., Jr. and E.B. Chamberlain. 1970. South Carolina Birdlife. Univ. S.C. Press. Columbia. 655 pp.

U.S. Fish and Wildlife Service. 1985. Determination of endangered and threatened status for the Piping Plover. federal Register 50(238):50.720–34.



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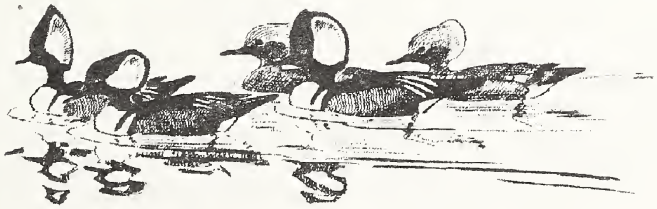

## 1993 North American Migration Day Count in North Carolina

ROBIN M. CARTER

The 1993 North American Migration Day Count in North Carolina, held on the second Saturday in May (8 May 1993), resulted in counts being held in eight counties around the state, from the coast to the mountains. These counties ( by geographic region, with county seat) were:

Coastal and Outer Coastal Plain:
- Brunswick (Southport)

Inner Coastal Plain:
- Pitt (Greenville)

Mountains and Piedmont:
- Polk (Columbus)
- Rutherford (Rutherfordton)

Mountains:
- Alleghany (Sparta)
- Buncombe (Asheville)
- Henderson (Hendersonville)
- Transylvania (Brevard)

In all 172 species and approximately 9,694 individual birds were observed in North Carolina. Total party-hours were 202.25; total party-miles were 781.5; total participants 155.

**Rarities and high counts:**

In Buncombe County one Nashville Warbler was found. All other counts found mostly expected species in typical or low numbers.

**Alleghany County, NC.** 5:00 AM to 10:30 PM. Temp 49° to 72° F. Wind SW, 0 to 10 mph. AM partly cloudy; PM hazy. Regular observers: 11 in field in 6 parties. Total regular party-hours 30; total regular party-miles 197; 9 hours and 9 miles on foot, 17 hours and 183 miles by car, 4 hours and 5 miles by ATV. Feeder watchers: 2 at 2 feeding stations. Feeder watcher hours 9. Totals: 39 party-hours, 197 party-miles, 13 participants.

Great Blue Heron 2; Canada Goose 2; Wood Duck 7; Ring-necked Duck 1; Black Vulture 5; Turkey Vulture 38; Sharp-shinned Hawk 1; Cooper's Hawk 1; Broad-winged Hawk 1; Red-tailed Hawk 1; Am. Kestrel 3; Ruffed Grouse 2; Wild Turkey 13; Killdeer 1; Pectoral Sandpiper 2; Rock Dove 10; Mourning Dove 39; Barn Owl 1; E. Screech-Owl 2; Whip-poor-will 1; Chimney Swift 20; Ruby-throated Hummingbird 16; Belted Kingfisher 1; Red-bellied Woodpecker 8; Downy Woodpecker 11; N. (Yellow-shafted) Flicker 4; Pileated Woodpecker 14; E. Wood-Pewee 1; Acadian Flycatcher 2; Willow Flycatcher 1; E. Phoebe 22; Great Crested Flycatcher 2; E. Kingbird 22; Purple Martin 1; Tree Swallow 25; N. Rough-winged Swallow 2; Barn Swallow 27; Blue Jay 49; Am. Crow 116; Com. Raven 4; Ca. Chickadee 18; Tufted Titmouse 16; White-breasted Nuthatch 11; Ca. Wren 6; House Wren 6; Blue-gray Gnatcatcher 6; E. Bluebird 47; Wood Thrush 6; Am. Robin 74; Gray Catbird 7; N. Mockingbird 10; Brown Thrasher 11; Loggerhead Shrike 2; Eur. Starling 39; White-eyed Vireo 4; Yellow-throated Vireo 2; Warbling Vireo 1; Red-eyed Vireo 19; N. Parula 2; Yellow Warbler 3; Magnolia Warbler 1; Black-throated Blue Warbler

1; Yellow-rumped (Myrtle) Warbler 6; Black-throated Green Warbler 1; Yellow-throated Warbler 2; Pine Warbler 2; Prairie Warbler 5; Blackpoll Warbler 2; Am. Redstart 2; Prothonotary Warbler 1; Ovenbird 19; Com. Yellowthroat 2; Summer Tanager 1; Scarlet Tanager 7; N. Cardinal 39; Rose-breasted Grosbeak 3; Indigo Bunting 84; Rufous-sided Towhee 51; Chipping Sparrow 51; Field Sparrow 17; Grasshopper Sparrow 2; Song Sparrow 36; White-throated Sparrow 1; Red-winged Blackbird 91; E. Meadowlark 16; Com. Grackle 76; Brown-headed Cowbird 42; Orchard Oriole 2; N. (Baltimore) Oriole 5; House Finch 71; Am. Goldfinch 60; House Sparrow 30.
Total: 92 species, 1500 individuals.
**Coordinator**: J.H. Coman III, Rt 1, Box 182, Piney Creek, NC 28663. Participants: Paul Bailey, Peggy Bailey, Richard Carter, Billie Coman, Jim Coman, James Coman, Vickie Daniel, Elizabeth Perot, Elizabeth Scott, Jack Scott, Hollis Wild, Jay Wild, Barbara Vroom.

**Brunswick County, NC.** 6:00 AM to 5:00 PM. Temp 62° to 84° F. Wind E, 5 mph. AM partly cloudy; PM partly cloudy. Regular observers: 10 in field in 6 parties. Total regular party-hours 37.5; total regular party-miles 102; 22 hours and 19 miles on foot, 6.5 hours and 72 miles by car, 2 hours and 2 miles by boat, 2 hours and 1 miles by ATV, 4.5 hours and 4 miles by golf cart, 0.5 hours and 4 miles by bicycle. Stationary observers: 3 in 2 parties. Stationary party-hours 16. Feeder watchers: 2 at 1 feeding station. Feeder watcher hours 3. Totals: 56.5 party-hours, 102 party-miles, 10 participants.

Brown Pelican 61; Double-crested Cormorant 62; Anhinga 1; Great Blue Heron 13; Great Egret 92; Snowy Egret 14; Tricolored Heron 3; Cattle Egret 9; Green Heron 25; Black-crowned Night-Heron 1; night heron sp. 3; White Ibis 73; Canada Goose 14; Wood Duck 15; Mallard 1; Black Vulture 1; Turkey Vulture 9; Osprey 13; N. Harrier 2; Red-shouldered Hawk 5; Red-tailed Hawk 2; N. Bobwhite 9; Clapper Rail 7; Com. Moorhen 4; Am. Coot 3; Black-bellied Plover 40; Wilson's Plover 8; Semipalmated Plover 33; Piping Plover 1; Killdeer 1; Am. Oystercatcher 16; Greater Yellowlegs 11; Willet 52; Spotted Sandpiper 4; Whimbrel 34; Ruddy Turnstone 3; Red Knot 31; Sanderling 53; Semipalmated Sandpiper 1; Least Sandpiper 2; Dunlin 62; Short-billed Dowitcher 92; dowitcher sp. 26; Laughing Gull 33; Ring-billed Gull 33; Herring Gull 12; Caspian Tern 3; Royal Tern 12; Forster's Tern 3; Least Tern 22; Black Skimmer 29; Rock Dove 9; Mourning Dove 102; Yellow-billed Cuckoo 9; Barred Owl 2; Chuck-will's-widow 5; Chimney Swift 14; Ruby-throated Hummingbird 4; Belted Kingfisher 1; Red-headed Woodpecker 23; Red-bellied Woodpecker 29; Downy Woodpecker 12; Hairy Woodpecker 2; N. (Yellow-shafted) Flicker 14; Pileated Woodpecker 10; E. Wood-Pewee 6; Acadian Flycatcher 11; Great Crested Flycatcher 39; E. Kingbird 14; Purple Martin 30; N. Rough-winged Swallow 1; Barn Swallow 86; Blue Jay 50; Am. Crow 20; Fish Crow 24; crow sp. 6; Ca. Chickadee 27; Tufted Titmouse 38; Brown-headed Nuthatch 10; Ca. Wren 40; Blue-gray Gnatcatcher 19; E. Bluebird 12; Wood Thrush 11; Am. Robin 5; Gray Catbird 3; N. Mockingbird 65; Brown Thrasher 25; Loggerhead Shrike 3; Eur. Starling 23; White-eyed Vireo 19; Yellow-throated Vireo 4; Red-eyed Vireo 14; N. Parula 17; Yellow-rumped (Myrtle) Warbler 4; Black-throated Green Warbler 1; Yellow-throated Warbler 5; Pine Warbler 17; Prairie Warbler 6; Prothonotary Warbler 23; Worm-eating Warbler 2; Swainson's Warbler 7; Ovenbird 5; Kentucky Warbler 1; Com.

Yellowthroat 7; Hooded Warbler 17; Yellow-breasted Chat 11; Summer Tanager 24; N. Cardinal 98; Blue Grosbeak 11; Indigo Bunting 20; Painted Bunting 2; Rufous-sided Towhee 25; Chipping Sparrow 1; Savannah Sparrow 2; Seaside Sparrow 7; Red-winged Blackbird 55; Boat-tailed Grackle 103; Com. Grackle 49; Brown-headed Cowbird 24; Orchard Oriole 17; N. (Baltimore) Oriole 1; Am. Goldfinch 20.
Total: 120 species, 2482 individuals.
**Coordinator**: Diane Hahn, 269 Sea Trail Drive, Sunset Beach, NC 28468. Participants: Carolyn Bush, Hanse Cherry, David Harper, Marge Harper, Bill McDavit, Kim McDavit, Mary McDavit, Michael McDavid, Rich Murray, Lynn Petch.

**Buncombe Co., NC.** 7:15 AM to 12:00 noon. AM fog and rain. Regular observers: 18 in field in 1 party. Total regular party-hours 4.75; total regular party-miles 42; 2 hours and 2 miles on foot, 2.75 hours and 40 miles by car. Totals: 4.75 party-hours, 42 party-miles, 18 participants.

Green Heron 1; Canada Goose 7; Wood Duck 2; Black Vulture 2; Spotted Sandpiper 1; Yellow-billed Cuckoo 1; Chimney Swift 2; Ruby-throated Hummingbird 3; Belted Kingfisher 1; Red-bellied Woodpecker 1; Downy Woodpecker 4; Hairy Woodpecker 1; N. (Yellow-shafted) Flicker 1; Pileated Woodpecker 1; E. Wood-Pewee 1; Acadian Flycatcher 3; E. Phoebe 2; Great Crested Flycatcher 4; E. Kingbird 2; N. Rough-winged Swallow 4; Barn Swallow 1; Blue Jay 1; Am. Crow 35; Com. Raven 2; Ca. Chickadee 9; Tufted Titmouse 5; Ca. Wren 2; Blue-gray Gnatcatcher 5; Wood Thrush 4; Am. Robin 2; Gray Catbird 1; N. Mockingbird 1; ÑEur. Starling 8; Solitary Vireo 3; Yellow-throated Vireo 2; Red-eyed Vireo 13; **Nashville Warbler 1**; N. Parula 6; Yellow Warbler 4; Chestnut-sided Warbler 6; Black-throated Blue Warbler 6; Yellow-rumped (Myrtle) Warbler 6; Black-throated Green Warbler 2; Yellow-throated Warbler 4; Blackpoll Warbler 1; Black-and-white Warbler 2; Worm-eating Warbler 1; Swainson's Warbler 3; Kentucky Warbler 7; Hooded Warbler 1; Scarlet Tanager 3; N. Cardinal 1; Blue Grosbeak 5; Rufous-sided Towhee 4; Chipping Sparrow 2; Song Sparrow 2; Com. Grackle 3; N. (Baltimore) Oriole 2; House Finch 1.
Total: 59 species, 211 individuals.
**Coordinator**: Peter Worthington, 716 N. Almond Drive, Simpsonville, SC 29681. Participants: Mary Acheson, Jack Cooper, Ruth Cooper, Jim Craig, Pat Earnhardt, Peggy Franklin, Martha Frederick, Bill Hough, Jean Hough, Bob Luthlaen, Elsie Thomas, Terry Thomas, Nancy Tilghman, Margot von Harten, Jay Wilhelmi, Betty Worthington, Peter Worthington, Ruth Young.

**Henderson Co., NC.** 8:30 AM to 4:30 PM. Temp 65° F. AM partly cloudy. No precipitation. Regular observers: 4 in field in 2 parties. Total regular party-hours 7; total regular party-miles 4; 7 hours and 4 miles on foot. Totals: 7 party-hours, 4 party-miles, 4 participants.

Canada Goose 8; Wood Duck 3; Mallard 1; Turkey Vulture 2; Sharp-shinned Hawk 1; Killdeer 1; Mourning Dove 2; E. Screech-Owl 1; Barred Owl 1; Chimney Swift 5; Belted Kingfisher 1; Red-bellied Woodpecker 3; Downy Woodpecker 1; N. (Yellow-shafted) Flicker 3; Acadian Flycatcher 1; Willow Flycatcher 1; Great Crested Flycatcher 3; Blue Jay 5; Am. Crow 2; Ca. Chickadee 2; Tufted Titmouse 6; Ca. Wren 2; House Wren 1; Wood Thrush 7;

Am. Robin 28; Gray Catbird 2; Brown Thrasher 4; Eur. Starling 5; Solitary Vireo 1; Red-eyed Vireo 4; N. Parula 1; Black-throated Green Warbler 2; Yellow-throated Warbler 1; Palm Warbler 1; Black-and-white Warbler 1; Am. Redstart 1; Worm-eating Warbler 1; N. Waterthrush 5; Com. Yellowthroat 6; Hooded Warbler 1; Scarlet Tanager 4; N. Cardinal 11; Indigo Bunting 3; Rufous-sided Towhee 9; Field Sparrow 3; Song Sparrow 4; Red-winged Blackbird 1; Com. Grackle 15; Am. Goldfinch 2.
Total 49 species, 179 individuals.
**Participants**: Wayne Forsythe, Adrienne Goldstein, Daniel Goldstein, Zora Weisbecker.

**Pitt Co., NC.** 5:45 AM to 9:00 PM. Temp 69° to 85° F. Wind calm. AM foggy; PM clear. Precipitation none. Regular observers: 11 in field in 6 parties. Total regular party-hours 33; total regular party-miles 222; 21 hours and 10 miles on foot, 12 hours and 212 miles by car. Owling observers: 1 in 1 party. Owling party-hours 1; owling party-miles 4. Stationary observers: 2 in 1 party. Stationary party-hours 5. Totals: 42 party-hours, 226 party-miles, 11 participants.

Double-crested Cormorant 7; Great Blue Heron 20; Great Egret 13; Snowy Egret 2; Cattle Egret 1; Green Heron 7; Canada Goose 27; Wood Duck 91; Mallard 30; Black Vulture 2; Turkey Vulture 81; Osprey 1; Bald Eagle 3 (3 immature); Red-shouldered Hawk 3; Broad-winged Hawk 2; Red-tailed Hawk 4; N. Bobwhite 21; Killdeer 22; Least Sandpiper 1; Rock Dove 4; Mourning Dove 119; Yellow-billed Cuckoo 21; Great Horned Owl 1; Barred Owl 7; Com. Nighthawk 4; Chuck-will's-widow 1; Whip-poor-will 1; Chimney Swift 85; Ruby-throated Hummingbird 6; Belted Kingfisher 6; Red-headed Woodpecker 4; Red-bellied Woodpecker 32; Downy Woodpecker 17; Hairy Woodpecker 1; N. (Yellow-shafted) Flicker 8; Pileated Woodpecker 13; E. Wood-Pewee 26; Acadian Flycatcher 23; E. Phoebe 2; Great Crested Flycatcher 43; E. Kingbird 2; Horned Lark 1; Purple Martin 42; N. Rough-winged Swallow 14; Barn Swallow 64; Blue Jay 23; Am. Crow 76; Fish Crow 25; Ca. Chickadee 50; Tufted Titmouse 32; White-breasted Nuthatch 4; Brown-headed Nuthatch 1; Ca. Wren 61; Blue-gray Gnatcatcher 54; E. Bluebird 67; Wood Thrush 33; Am. Robin 110; Gray Catbird 17; N. Mockingbird 38; Brown Thrasher 21; Loggerhead Shrike 1; Eur. Starling 341; White-eyed Vireo 28; Yellow-throated Vireo 4; Red-eyed Vireo 28; N. Parula 20; Yellow Warbler 3; Black-throated Blue Warbler 2; Yellow-rumped (Myrtle) Warbler 2; Yellow-throated Warbler 5; Pine Warbler 11; Prairie Warbler 18; Blackpoll Warbler 10; Black-and-white Warbler 9; Am. Redstart 1; Prothonotary Warbler 34; Worm-eating Warbler 1; Swainson's Warbler 1; Ovenbird 15; N. Waterthrush 1; La. Waterthrush 3; Kentucky Warbler 5; Com. Yellowthroat 40; Hooded Warbler 5; Yellow-breasted Chat 9; Summer Tanager 18; Scarlet Tanager 5; N. Cardinal 76; Blue Grosbeak 16; Indigo Bunting 69; Rufous-sided Towhee 34; Chipping Sparrow 39; Field Sparrow 13; Song Sparrow 1; Swamp Sparrow 1; White-throated Sparrow 1; Red-winged Blackbird 36; E. Meadowlark 47; Com. Grackle 253; Brown-headed Cowbird 55; Orchard Oriole 15; House Finch 28; Am. Goldfinch 35; House Sparrow 124.
Total 104 species, 2960 individuals.
Coordinator : Veronica Pantelidis, 106 Lakeview Drive, Greenville, NC 27858.
**Participants**: Larry Auld, Joe Boyette, Kim Greene, Lorrayne Graff, Mike

Hoekstra, Leslie Hoestra, David Kaminski, Jill Kaminski, Veronica Pantelidis, Dan Swartout, Howard Vainright.

**Polk Co., NC.** 7:30 AM to 5:00 PM. Temp 60° to 65° F. Wind calm. AM cloudy; PM cloudy. Precipitation light rain. Regular observers: 57 in field in 6 parties. Total regular party-hours 31; total regular party-miles 165; 12 hours and 5 miles on foot, 19 hours and 160 miles by car. Totals: 31 party-hours, 165 party-miles, 57 participants.

Double-crested Cormorant 1; Great Blue Heron 1; Canada Goose 16; Mallard 9; Black Vulture 3; Turkey Vulture 16; Osprey 1; Broad-winged Hawk 4; Wild Turkey 1; Spotted Sandpiper 1; Rock Dove 2; Mourning Dove 13; Chimney Swift 33; Ruby-throated Hummingbird 9; Belted Kingfisher 2; Red-bellied Woodpecker 12; Downy Woodpecker 3; N. (Yellow-shafted) Flicker 3; Pileated Woodpecker 5; E. Wood-Pewee 6; Acadian Flycatcher 21; E. Phoebe 19; Great Crested Flycatcher 5; E. Kingbird 5; N. Rough-winged Swallow 16; Barn Swallow 44; Blue Jay 18; Am. Crow 32; Ca. Chickadee 29; Tufted Titmouse 30; White-breasted Nuthatch 4; Ca. Wren 27; Blue-gray Gnatcatcher 49; E. Bluebird 15; Wood Thrush 30; Am. Robin 25; Gray Catbird 12; N. Mockingbird 2; Brown Thrasher 9; Cedar Waxwing 25; Eur. Starling 12; White-eyed Vireo 5; Solitary Vireo 8; Yellow-throated Vireo 8; Red-eyed Vireo 84; N. Parula 15; Yellow Warbler 2; Chestnut-sided Warbler 1; Magnolia Warbler 1; Cape May Warbler 6; Black-throated Blue Warbler 7; Yellow-rumped (Myrtle) Warbler 20; Black-throated Green Warbler 8; Blackburnian Warbler 2; Yellow-throated Warbler 29; Pine Warbler 17; Prairie Warbler 8; Palm Warbler 1; Bay-breasted Warbler 1; Blackpoll Warbler 12; Cerulean Warbler 24; Black-and-white Warbler 18; Am. Redstart 35; Worm-eating Warbler 12; Ovenbird 9; La. Waterthrush 4; Kentucky Warbler 7; Com. Yellowthroat 15; Hooded Warbler 28; Canada Warbler 1; Yellow-breasted Chat 16; Summer Tanager 2; Scarlet Tanager 31; N. Cardinal 32; Indigo Bunting 74; Rufous-sided Towhee 25; Chipping Sparrow 13; Field Sparrow 3; Song Sparrow 20; Red-winged Blackbird 21; E. Meadowlark 4; Com. Grackle 43; Brown-headed Cowbird 8; blackbird sp. 5; Orchard Oriole 1; N. (Baltimore) Oriole 3; House Finch 8; Am. Goldfinch 41; House Sparrow 12.

Total: 88 species, 1320 individuals.

**Participants**: Doris Alexander, Lynn Barber, Rich Boyd, Peggy Ferbee, Gwen Frazier, Jerry Frazier, Wade Fuller, Buddy Garrett, Sue Glasby, Charlotte Goedsche, Evelyn Goldston, Grady Goldston, Jo Goldston, Joe Goldston, Betty Grady, Herb Hendrickson, Gene Howe, Bob Holmes, John Huggins, Stephanie Hudak, Gail Lankford, Herman Lankford, Harry LeGrand, Julie Mansfield, Phyllis Mansfield, Adam Martin, Jean McCoy, Barbara McIntyre, Dot McMurray, Mac McMurray, Susan Mitchell, Lynn Mosley, C.J. Nelson, Frances Nelson, Betty Rand, Jo Rand, Holly Reynolds, Barton Rope, Beth Rope, Harriet Sato, Julia Shields, Ned Shuler, Teddy Shuler, David Small, Lucy Small, Robin Small, Tom Small, Ben Smith, Clyde Smith, Lucy Smith, Frank Spivey, Virginia Spivey, Pam Thompson, Emily Tyler, Ken Wilkens, John Wright, Paula Wright.

**Rutherford County, NC.** 8:00 AM to 3:15 PM. Temp 65° to 78° F. Wind calm. AM rain; PM partly cloudy. Regular observers: 40 in field in 5 parties. Total regular party-hours 16.5; total regular party-miles 26; 13 hours and 9

miles on foot, 2 hours and 12 miles by car, 1.5 hours and 5 miles by boat. Totals: 16.5 party-hours, 26 party-miles, 40 participants.

Green Heron 4; Canada Goose 2; Wood Duck 10; Black Vulture 2; Turkey Vulture 47; Bald Eagle 1 (1 immature); Killdeer 5; Spotted Sandpiper 7; Mourning Dove 5; Chimney Swift 17; Ruby-throated Hummingbird 2; Belted Kingfisher 3; Red-bellied Woodpecker 1; Downy Woodpecker 1; N. Flicker 3; Pileated Woodpecker 2; Acadian Flycatcher 1; E. Phoebe 1; Great Crested Flycatcher 2; E. Kingbird 3; N. Rough-winged Swallow 33; Barn Swallow 27; Blue Jay 8; Am. Crow 15; Ca. Chickadee 4; Tufted Titmouse 6; White-breasted Nuthatch 1; Ca. Wren 3; Blue-gray Gnatcatcher 4; E. Bluebird 3; Swainson's Thrush 1; Wood Thrush 13; Am. Robin 10; Gray Catbird 14; Cedar Waxwing 1; Eur. Starling 23; Solitary Vireo 1; Yellow-throated Vireo 1; Red-eyed Vireo 9; Yellow Warbler 11; Cape May Warbler 3; Black-throated Blue Warbler 9; Yellow-rumped (Myrtle) Warbler 7; Black-throated Green Warbler 16; Pine Warbler 1; Blackpoll Warbler 2; Black-and-white Warbler 7; Am. Redstart 5; Worm-eating Warbler 10; Swainson's Warbler 3; La. Waterthrush 1; Com. Yellowthroat 3; Hooded Warbler 12; Scarlet Tanager 3; N. Cardinal 2; Rose-breasted Grosbeak 1; Indigo Bunting 5; Rufous-sided Towhee 7; Song Sparrow 18; Swamp Sparrow 1; Dark-eyed Junco 1; Red-winged Blackbird 45; Com. Grackle 27; Brown-headed Cowbird 1; Orchard Oriole 3; House Finch 1; Am. Goldfinch 8; House Sparrow 1.

Total 68 species, 510 individuals.

**Participants**: Robbie Allen, Tom Allen, Betty Brown, Andrea Ceselski, Ellie Colton, Anne Cromartie, Evylin Cunningham, M.L. Cunningham, David Donmoyer, Nancy Everhart, Buddy Garrett, Jane Holt, Gene Howe, Dorothy Hungate, Louise LaCrosse, Liz Lathrop, Bill LeGrand, Carolyn LeGrand, Joann Martin, Joel McConnell, Sue McConnell, Robert McSherry, Nell Moore, Grady Oliver, Esther Pardue, Len Pardue, Marcia Pryor, Ann Richardson, Harry Sherwood, Mary Sherwood, Tonya Spires, Frank Spivey, Virginia Spivey, Jimmie Stringer, Simon Thompson, Zora Weisbecker, Bonnie Wilkison, Dave Wilkison, Pat Wilkison, Bob Wood.

**Transylvania County, NC.** 6:30 AM to 5:00 PM. Temp 50° F to 60° F. Wind calm. AM light rain, PM light rain. Regular observers: 2 in field in 1 party. Total regular party-hours 4.5; total regular party-miles 19.5; 1.25 hours and 1 mile on foot, 3.25 hours and 18.5 miles by car. Stationary observers: 1 in 1 party. Stationary party-hours 1. Totals: 5.5 party-hours, 19.5 party-miles, 2 participants.

Green Heron 1; Mallard 4; Am. Kestrel 1; Killdeer 1; Solitary Sandpiper 1; Mourning Dove 11; Yellow-billed Cuckoo 1; Chimney Swift 17; Ruby-throated Hummingbird 1; Red-bellied Woodpecker 2; Downy Woodpecker 1; N. Flicker 5; Pileated Woodpecker 1; E. Wood-Pewee 2; Willow Flycatcher 2; E. Phoebe 1; Great Crested Flycatcher 3; N. Rough-winged Swallow 1; Barn Swallow 26; Blue Jay 16; Am. Crow 33; Ca. Chickadee 8; Tufted Titmouse 19; White-breasted Nuthatch 2; Ca. Wren 7; Blue-gray Gnatcatcher 3; E. Bluebird 2; Wood Thrush 8; Am. Robin 28; Gray Catbird 2; N. Mockingbird 3; Brown Thrasher 2; Eur. Starling 70; White-eyed Vireo 4; Solitary Vireo 1; Red-eyed Vireo 5; N. Parula 7; Yellow Warbler 1; Chestnut-sided Warbler 9; Black-throated Blue Warbler 7; Yellow-throated Warbler 2; Black-and-white Warbler 12; Am. Redstart 2; Ovenbird 7; Com. Yellowthroat 3; Hooded Warbler 10;

Canada Warbler 2; Yellow-breasted Chat 1; Scarlet Tanager 2; N. Cardinal 15; Indigo Bunting 3; Rufous-sided Towhee 32; Chipping Sparrow 8; Song Sparrow 15; Dark-eyed Junco 3; Red-winged Blackbird 15; E. Meadowlark 3; Com. Grackle 30; Brown-headed Cowbird 3; House Finch 7; Am. Goldfinch 27; House Sparrow 12.
Total 62 species, 532 individuals.
**Coordinators**: Bill and Wilma Siebenheller, 187 Glen Cannon Drive, Pisgah Forest, NC 28768. Participants: Bill Siebenheller, Wilma Siebenheller.

## 1993 North American Migration Day Count in South Carolina

ROBIN M. CARTER

The 1993 North American Migration Day Count in South Carolina, held on the second Saturday in May (8 May 1993), resulted in counts being held in eleven counties around the state, from the coast to the mountains. These counties (by geographic region, with county seat) were:
Coastal and Outer Coastal Plain:
Charleston County (Charleston)
Jasper County (Hardeeville)
Inner Coastal Plain:
Hampton County (Hampton)
Piedmont and Inner Coastal Plain (i.e. Fall Line area):
Lexington County (Lexington)
Richland County (Columbia)
Piedmont:
Chester County (Chester)
Fairfield County (Winnsboro)
Newberry County (Newberry)
Spartanburg County (Spartanburg)
York County (York)
Mountains and Piedmont:
Oconee County (Walhalla)

In all some 194 species and approximately 36,436 individual birds were observed in South Carolina. Total party-hours were 233.25; total party-miles were 1,192.75; total participants numbered 67. (Note that the five people who counted Fairfield County in the morning moved over the Broad River and counted Newberry County in the afternoon. Counting these five twice gives a total of 72 "county-participants".

**Rarities and high counts:**

Charleston counters reported a healthy 216 Orchard Orioles, but none of the 145 species were very unusual (unless the unidentified *Empidonax* flycatcher was something other than the expected Acadian).
Chester had a Barn Owl (a long-time and very dependable stake-out) and some 600 Cliff Swallows (indicating just how common this species has become under bridges over Piedmont reservoirs).

In Fairfield County two White-breasted Nuthatches were reported — a species rarely encountered in this county, due to the lack of old growth forests.

A late Peregrine Falcon was found in Jasper County. Jasper also reported many high counts of shorebirds, mostly found at the Savannah spoil site, including 1002 Black-necked Stilts, 153 Greater Yellowlegs, 202 Lesser Yellowlegs, 4000 Semipalmated Sandpipers, 7064 Least Sandpipers, and 4000 unidentified peep. Other local rarities found in Jasper County included one Least Flycatcher, one Cliff Swallow, and two Grasshopper Sparrows.

Counters in Oconee County found a somewhat unusual Caspian Tern and a very late Yellow-bellied Sapsucker.

Spartanburg County counters had two somewhat late White-crowned Sparrows.

**Charleston County, SC.** 5:30 AM to 9:00 PM. Temp 59° to 78° F. Wind SE to S, 0 to 10 mph. AM cloudy; PM clear. Regular observers: 18 in field in 7 parties. Total regular party-hours 62; total regular party-miles 450; 45 hours and 42 miles on foot, 15 hours and 405 miles by car, 2 hours and 3 miles by bicycle. Owling observers: 4 in 4 parties. Owling party-hours 3.5; owling party-miles 3. Stationary observers: 4 in 3 parties. Stationary party-hours 10. Feeder watchers: 8 at 8 feeding stations. Feeder watcher hours 10. Totals: 75.5 party-hours, 453 party-miles, 18 participants.

Pied-billed Grebe 11; N. Gannet 1; Brown Pelican 448; Double-crested Cormorant 109; Anhinga 44; Least Bittern 12; Great Blue Heron 39; Great Egret 166; Snowy Egret 72; Little Blue Heron 25; Tricolored Heron 31; Green Heron 70; Black-crowned Night-Heron 17; Yellow-crowned Night-Heron 10; White Ibis 172; Wood Stork 2; Canada Goose 6; Wood Duck 37; Mallard 22; Blue-winged Teal 1; Black Vulture 13; Turkey Vulture 73; Osprey 19; Am. Swallow-tailed Kite 1; Mississippi Kite 6; Bald Eagle 4 (3 adult, 1 immature); Sharp-shinned Hawk 2; Red-shouldered Hawk 11; Red-tailed Hawk 19; Wild Turkey 3; N. Bobwhite 26; Clapper Rail 40; King Rail 1; Sora 1; Com. Moorhen 54; Am. Coot 14; Black-bellied Plover 96; Wilson's Plover 45; Semipalmated Plover 550; Killdeer 29; Am. Oystercatcher 7; Black-necked Stilt 1; Greater Yellowlegs 8; Solitary Sandpiper 3; Willet 48; Spotted Sandpiper 16; Whimbrel 47; Ruddy Turnstone 8; Red Knot 360; Sanderling 405; Semipalmated Sandpiper 60; Western Sandpiper 6; Least Sandpiper 7; White-rumped Sandpiper 2; Dunlin 221; peep sp. 8; Short-billed Dowitcher 145; Laughing Gull 612; Ring-billed Gull 139; Herring Gull 17; Great Black-backed Gull 1; Gull-billed Tern 8; Royal Tern 270; Sandwich Tern 15; Com. Tern 8; Forster's Tern 25; Least Tern 145; Black Skimmer 23; Rock Dove 53; Mourning Dove 181; Yellow-billed Cuckoo 43; E. Screech-Owl 2; Great Horned Owl 2; Barred Owl 8; Com. Nighthawk 6; Chuck-will's-widow 11; Whip-poor-will 4; Chimney Swift 541; Ruby-throated Hummingbird 12; Belted Kingfisher 8; Red-headed Woodpecker 21; Red-bellied Woodpecker 79; Downy Woodpecker 17; Red-cockaded Woodpecker 2; N. (Yellow-shafted) Flicker 2; Pileated Woodpecker 20; E. Wood-Pewee 84; Acadian Flycatcher 56; *Empidonax* sp. 1; Great Crested Flycatcher 257; E. Kingbird 23; Purple Martin 100; Tree Swallow 177; N. Rough-winged Swallow 10; Bank Swallow 5; Barn Swallow 502; Blue Jay 64; Am. Crow 47; Fish Crow 89; crow sp. 25; Ca. Chickadee 86; Tufted Titmouse 77; White-breasted Nuthatch 3; Brown-headed Nuthatch 12; Ca. Wren 150; House Wren 1; Marsh Wren 10; Blue-gray

Gnatcatcher 83; E. Bluebird 29; Wood Thrush 17; Am. Robin 10; Gray Catbird 11; N. Mockingbird 158; Brown Thrasher 96; Cedar Waxwing 3; Loggerhead Shrike 29; Eur. Starling 216; White-eyed Vireo 52; Yellow-throated Vireo 15; Red-eyed Vireo 41; N. Parula 72; Yellow Warbler 4; Yellow-rumped (Myrtle) Warbler 4; Yellow-throated Warbler 90; Pine Warbler 31; Prairie Warbler 22; Prothonotary Warbler 37; Ovenbird 1; Kentucky Warbler 1; Com. Yellowthroat 94; Hooded Warbler 4; Yellow-breasted Chat 16; Summer Tanager 65; N. Cardinal 377; Blue Grosbeak 9; Indigo Bunting 42; Painted Bunting 78; Rufous-sided Towhee 103; Bachman's Sparrow 22; Chipping Sparrow 5; Field Sparrow 8; Savannah Sparrow 17; Red-winged Blackbird 519; Boat-tailed Grackle 407; Com. Grackle 620; Brown-headed Cowbird 171; blackbird sp. 106; Orchard Oriole **216**; House Sparrow 31.
Total: 145 species, 11,640 individuals.
**Coordinator**: Perry Nugent, 2260 Dallerton Circle, Charleston, SC 29414.
Participants: M. Aldenderfer, Joan Cole, Robert Feury, Dennis Forsythe, Donna Forsythe, Randy Grooer, Fernanda Hastie, Tom Herbert, Joan Hylander, Ann Kent, Ginny Miller, Holland Mills, Perry Nugent, Madeline Peel, Ernie Prupis, Joseph Stevenot, Martha Stevenot, Charles Walters.

**Chester County, SC.** 6:57 AM to 8:43 PM. Temp 65° to 81° F. Wind calm. AM clear; PM clear. Regular observers: 2 in field in 1 party. Total regular party-hours 13.5; total regular party-miles 87; 11 hours and 9 miles on foot, 2.5 hours and 78 miles by car. Owling observers: 1 in 1 party. Owling party-hours 0.5; owling party-miles 0. Totals: 14 party-hours, 87 party-miles, 2 participants.

Double-crested Cormorant 6, Green Heron 1; Canada Goose 5; Wood Duck 1; Mallard 8; Black Vulture 5; Turkey Vulture 11; Red-tailed Hawk 1; Wild Turkey 1; N. Bobwhite 2; Killdeer 1; Spotted Sandpiper 1; Rock Dove 2; Mourning Dove 12; Yellow-billed Cuckoo 3; **Barn Owl 1**; Chuck-will's-widow 2; Whip-poor-will 2; Chimney Swift 15; Belted Kingfisher 3; Red-bellied Woodpecker 2; Downy Woodpecker 1; N. (Yellow-shafted) Flicker 2; Pileated Woodpecker 1; E. Wood-Pewee 1; E. Phoebe 3; Great Crested Flycatcher 3; E. Kingbird 3; Purple Martin 19; Tree Swallow 2; N. Rough-winged Swallow 2; Cliff Swallow **600**; Barn Swallow 4; Blue Jay 7; Am. Crow 27; Fish Crow 2; Ca. Chickadee 11; Tufted Titmouse 3; Brown-headed Nuthatch 6; Ca. Wren 7; Blue-gray Gnatcatcher 1; E. Bluebird 17; Wood Thrush 2; Am. Robin 5; Gray Catbird 2; N. Mockingbird 11; Brown Thrasher 3; Loggerhead Shrike 1; Eur. Starling 15; White-eyed Vireo 5; Red-eyed Vireo 7; Yellow-rumped (Myrtle) Warbler 1; Pine Warbler 2; Prairie Warbler 1; Blackpoll Warbler 1; Am. Redstart 1; La. Waterthrush 1; Yellow-breasted Chat 5; Summer Tanager 3; N. Cardinal 11; Blue Grosbeak 3; Indigo Bunting 3; Rufous-sided Towhee 7; Chipping Sparrow 3; Red-winged Blackbird 7; E. Meadowlark 13; Com. Grackle 22; Brown-headed Cowbird 4; Orchard Oriole 2; Am. Goldfinch 5; House Sparrow 11.
Total: 71 species, 964 individuals.
**Coordinator**: Albert Conway, 1672 Deer Run Road, Catawba, SC 29704.
Participants: Albert Conway, June Conway.

**Fairfield County, SC.** 8:15 AM to 12:30 PM. Regular observers: 5 in field in 1 party. Total regular party-hours 4; total regular party-miles 3; 4 hours and 3 miles on foot. Totals: 4 party-hours, 3 party-miles, 5 participants.

Double-crested Cormorant 2; Great Blue Heron 3; Canada Goose 15; Wood Duck 3; Mallard 2; Turkey Vulture 1; Red-shouldered Hawk 2; Red-tailed Hawk 1; N. Bobwhite 1; Killdeer 3; Mourning Dove 2; Yellow-billed Cuckoo 4; E. Screech-Owl 1; Chimney Swift 3; Ruby-throated Hummingbird 2; Belted Kingfisher 1; Red-bellied Woodpecker 2; Pileated Woodpecker 1; Acadian Flycatcher 2; E. Phoebe 2; E. Kingbird 5; N. Rough-winged Swallow 1; Barn Swallow 5; Blue Jay 5; Am. Crow 3; Fish Crow 3; Ca. Chickadee 3; Tufted Titmouse 3; **White-breasted Nuthatch 2**; Ca. Wren 5; Blue-gray Gnatcatcher 2; Wood Thrush 2; Am. Robin 1; Gray Catbird 1; N. Mockingbird 2; Brown Thrasher 1; White-eyed Vireo 10; Red-eyed Vireo 5; N. Parula 5; Pine Warbler 1; Am. Redstart 5; Prothonotary Warbler 2; Kentucky Warbler 1; Com. Yellowthroat 20; Yellow-breasted Chat 8; Summer Tanager 2; N. Cardinal 15; Blue Grosbeak 1; Indigo Bunting 22; Rufous-sided Towhee 10; Field Sparrow 2; Savannah Sparrow 1; Red-winged Blackbird 14; Com. Grackle 6; Brown-headed Cowbird 4; Orchard Oriole 1; Am. Goldfinch 8.
Total: 57 species, 240 individuals.
**Coordinator**: Bruce Smart, 1202-B Barr Road, Lexington, SC 29072. Participants: James Glathar, John Gross, Carol Secol, Bruce Smart, Donna Smart.

**Hampton County, SC.** 7:00 AM to 5:15 PM. Temp 61° to 90° F. Wind SE to S, 0 to 10 mph. AM foggy; PM partly cloudy. No precipitation. Regular observers: 2 in field in 1 party. Total regular party-hours 10.25; total regular party-miles 81; 5.25 hours and 9 miles on foot, 5 hours and 72 miles by car. Totals: 10.25 party-hours, 81 party-miles, 2 participants.

Double-crested Cormorant 2; Anhinga 13; Great Blue Heron 1; Little Blue Heron 15; Cattle Egret 2; Green Heron 4; Wood Duck 4; Black Vulture 1; Turkey Vulture 9; Mississippi Kite 2; Red-shouldered Hawk 1; Red-tailed Hawk 1; N. Bobwhite 3; Com. Moorhen 5; Killdeer 3; Rock Dove 6; Mourning Dove 22; Yellow-billed Cuckoo 1; Chimney Swift 13; Ruby-throated Hummingbird 1; Red-headed Woodpecker 20; Red-bellied Woodpecker 10; Downy Woodpecker 2; Red-cockaded Woodpecker 3; N. (Yellow-shafted) Flicker 1; E. Wood-Pewee 2; Great Crested Flycatcher 17; E. Kingbird 11; Purple Martin 5; N. Rough-winged Swallow 5; Barn Swallow 8; Blue Jay 4; Am. Crow 6; Fish Crow 10; crow sp. 22; Ca. Chickadee 2; Tufted Titmouse 6; White-breasted Nuthatch 6; Brown-headed Nuthatch 20; Ca. Wren 5; Blue-gray Gnatcatcher 12; E. Bluebird 16; Am. Robin 1; Gray Catbird 1; N. Mockingbird 24; Brown Thrasher 6; Cedar Waxwing 3; Loggerhead Shrike 7; Eur. Starling 3; White-eyed Vireo 2; N. Parula 1; Yellow-throated Warbler 1; Pine Warbler 3; Prothonotary Warbler 2; Com. Yellowthroat 2; Yellow-breasted Chat 2; Summer Tanager 3; N. Cardinal 28; Blue Grosbeak 4; Indigo Bunting 2; Rufous-sided Towhee 6; Chipping Sparrow 4; Bobolink 7; Red-winged Blackbird 26; E. Meadowlark 2; Com. Grackle 44; Orchard Oriole 20; Am. Goldfinch 6; House Sparrow 2.
Total: 68 species, 519 individuals.
**Coordinator**: Carroll Richard, P.O. Box 893, Hampton, SC 29924. Participants: Carroll Richard, Robert Richard.

**Jasper County, SC.** 7:00 AM to 9:00 PM. Temp 65° to 90° F. Wind E, 0 to 10 mph. AM mostly clear; PM partly cloudy. No precipitation. Regular

observers: 12 in field in 6 parties. Total regular party-hours 37.5; total regular party-miles 104; 29 hours and 22 miles on foot, 5 hours and 57 miles by car, 3.5 hours and 25 miles by boat. Totals: 37.5 party-hours, 104 party-miles, 12 participants.

Pied-billed Grebe 2; Double-crested Cormorant 8; Anhinga 28; Least Bittern 7; Great Blue Heron 29; Great Egret 76; Snowy Egret 29; Little Blue Heron 14; Tricolored Heron 36; Cattle Egret 11; Green Heron 29; Black-crowned Night-Heron 33; Yellow-crowned Night-Heron 3; night heron sp. 1; White Ibis 1; Glossy Ibis 15; Wood Stork 7; Wood Duck 23; Green-winged Teal 1; Mottled Duck 26; Lesser Scaup 1; Black Vulture 17; Turkey Vulture 31; Osprey 5; Am. Swallow-tailed Kite 1; Mississippi Kite 4; Cooper's Hawk 1; Red-shouldered Hawk 2; Red-tailed Hawk 10; Am. Kestrel 1; **Peregrine Falcon 1**; N. Bobwhite 18; Clapper Rail 6; Purple Gallinule 1; Com. Moorhen 41; Black-bellied Plover 3; Wilson's Plover 6; Semipalmated Plover 42; Killdeer 4; Black-necked Stilt 1002; Greater Yellowlegs **153**; Lesser Yellowlegs **202**; Solitary Sandpiper 1; Willet 15; Spotted Sandpiper 8; Whimbrel 3; Sanderling 25; Semipalmated Sandpiper **4000**; Least Sandpiper **7064**; White-rumped Sandpiper 4; Dunlin 11; peep sp. **4000**; Stilt Sandpiper 4; dowitcher sp. 12; Laughing Gull 6; Ring-billed Gull 60; Herring Gull 7; Gull-billed Tern 4; Caspian Tern 1; Royal Tern 2; Least Tern 157; Black Skimmer 1; Rock Dove 11; Mourning Dove 107; Com. Ground-Dove 2; Yellow-billed Cuckoo 2; Com. Nighthawk **26**; Chuck-will's-widow 7; Chimney Swift 11; Ruby-throated Hummingbird 2; Belted Kingfisher 4; Red-headed Woodpecker 11; Red-bellied Woodpecker 40; Downy Woodpecker 6; N. (Yellow-shafted) Flicker 4; Pileated Woodpecker 16; E. Wood-Pewee 15; Acadian Flycatcher 1; **Least Flycatcher 1**; Great Crested Flycatcher 34; E. Kingbird 26; Purple Martin 5; Tree Swallow 3; **Cliff Swallow 1**; Barn Swallow 81; Blue Jay 36; Am. Crow 31; Fish Crow 9; crow sp. 10; Ca. Chickadee 14; Tufted Titmouse 24; White-breasted Nuthatch 2; Brown-headed Nuthatch 4; Ca. Wren 23; Marsh Wren 1; Blue-gray Gnatcatcher 30; E. Bluebird 8; Wood Thrush 6; Am. Robin 15; Gray Catbird 8; N. Mockingbird 27; Brown Thrasher 30; Cedar Waxwing 7; Loggerhead Shrike 4; Eur. Starling 10; White-eyed Vireo 32; Yellow-throated Vireo 5; Red-eyed Vireo 9; N. Parula 45; Yellow-rumped (Myrtle) Warbler 3; Yellow-throated Warbler 16; Pine Warbler 22; Prairie Warbler 2; Prothonotary Warbler 2; Com. Yellowthroat 26; Yellow-breasted Chat 12; Summer Tanager 33; N. Cardinal 39; Blue Grosbeak 6; Indigo Bunting 13; Painted Bunting 15; Rufous-sided Towhee 30; **Grasshopper Sparrow 2**; White-throated Sparrow 1; Bobolink 58; Red-winged Blackbird 200; Boat-tailed Grackle 166; Com. Grackle 17; Brown-headed Cowbird 10; Orchard Oriole 15.
Total 127 species, 18,810 individuals.
**Coordinator**: Tom Smith, 313 Abercorn St., Savannah, GA 31401. Participants: Sam Brayshaw, Gail Krueger, John Metz, Patricia Metz, Mark Musaus, Tom Nicolls, Robin North, Ray Porter, Lincoln Smith, Tom Smith, Janet Throne, Jim Throne.

**Lexington County, SC.** 7:45 AM to 9:00 PM. Regular observers: 2 in field in 2 parties. Total regular party-hours 9; total regular party-miles 25; 7.5 hours and 3 miles on foot, 1.5 hours and 22 miles by car. Owling observers: 1 in 1 party. Owling party-hours 1; owling party-miles 0. Feeder watchers: 2 at 2

feeding stations. Feeder watcher hours 4. Totals: 14 party-hours, 25 party-miles, 2 participants.

Great Blue Heron 1; Turkey Vulture 6; Red-tailed Hawk 1; Wild Turkey 1; Mourning Dove 19; Yellow-billed Cuckoo 2; Chuck-will's-widow 2; Whip-poor-will 4; Chimney Swift 10; Ruby-throated Hummingbird 2; Red-headed Woodpecker 2; Red-bellied Woodpecker 13; Downy Woodpecker 5; N. (Yellow-shafted) Flicker 1; Pileated Woodpecker 5; E. Wood-Pewee 1; Great Crested Flycatcher 11; E. Kingbird 1; Purple Martin 6; N. Rough-winged Swallow 2; Barn Swallow 5; Blue Jay 15; Am. Crow 3; Fish Crow 2; crow sp. 9; Ca. Chickadee 6; Tufted Titmouse 12; Brown-headed Nuthatch 6; Ca. Wren 21; E. Bluebird 6; Wood Thrush 2; Am. Robin 9; Gray Catbird 3; N. Mockingbird 14; Brown Thrasher 8; Loggerhead Shrike 1; Eur. Starling 3; White-eyed Vireo 4; Red-eyed Vireo 1; Black-throated Blue Warbler 1; Pine Warbler 10; Am. Redstart 4; Com. Yellowthroat 4; Hooded Warbler 2; Summer Tanager 4; N. Cardinal 13; Blue Grosbeak 1; Rufous-sided Towhee 11; Chipping Sparrow 2; Red-winged Blackbird 3; Com. Grackle 18; Brown-headed Cowbird 2; Orchard Oriole 3; House Finch 22; Am. Goldfinch 10.
Total 54 species, 332 individuals.
**Participants**: Molly Bonnell, Jack Stewart.

**Newberry County, SC.** 1:00 PM to 4:00 PM. Regular observers: 5 in field in 1 party. Total regular party-hours 3; total regular party-miles 10.5; 2.5 hours and 2.5 miles on foot, 0.5 hours and 8 miles by car. Totals: 3 party-hours, 10.5 party-miles, 5 participants.

Black Vulture 1; Turkey Vulture 2; Broad-winged Hawk 1; Red-tailed Hawk 2; Wild Turkey 4; N. Bobwhite 1; Killdeer 1; Mourning Dove 3; Yellow-billed Cuckoo 3; Chimney Swift 3; Ruby-throated Hummingbird 1; Belted Kingfisher 1; E. Wood-Pewee 3; E. Phoebe 1; E. Kingbird 1; Purple Martin 19; N. Rough-winged Swallow 10; Cliff Swallow 15; Barn Swallow 7; Blue Jay 2; Am. Crow 10; Ca. Chickadee 1; Tufted Titmouse 4; Brown-headed Nuthatch 2; Ca. Wren 3; Blue-gray Gnatcatcher 4; Wood Thrush 1; Am. Robin 3; N. Mockingbird 9; Brown Thrasher 2; White-eyed Vireo 7; Red-eyed Vireo 9; N. Parula 3; Magnolia Warbler 1; Prairie Warbler 1; Com. Yellowthroat 1; Yellow-breasted Chat 1; Summer Tanager 3; N. Cardinal 21; Indigo Bunting 7; Rufous-sided Towhee 5; E. Meadowlark 3; Com. Grackle 4; Brown-headed Cowbird 1.
Total: 44 species, 187 individuals.
**Coordinator**: Bruce Smart, 1202-B Barr Road, Lexington, SC 29072. Participants: James Glathar, John Gross, Carol Secol, Bruce Smart, Donna Smart.

**Oconee County, SC.** 7:00 AM to 7:00 PM. Regular observers: 12 in field in 5 parties. Total regular party-hours 32.5; total regular party-miles 291.75; 15.75 hours and 19.5 miles on foot, 16.75 hours and 272 miles by car. Totals: 32.5 party-hours, 291.25 party-miles, 12 participants.

Great Blue Heron 1; Green Heron 1; Canada Goose 41; Wood Duck 8; Mallard 9; Lesser Scaup 1; Black Vulture 3; Turkey Vulture 5; Red-shouldered Hawk 1; Broad-winged Hawk 2; Red-tailed Hawk 1; N. Bobwhite 1; Killdeer 3; Spotted Sandpiper 2; peep sp. 6; Ring-billed Gull 1; **Caspian Tern 1**; Rock Dove 2; Mourning Dove 73; E. Screech-Owl 1; Chimney Swift 124; Ruby-

throated Hummingbird 9; Belted Kingfisher 5; Red-headed Woodpecker 1; Red-bellied Woodpecker 12; **Yellow-bellied Sapsucker 1**; Downy Woodpecker 2; Hairy Woodpecker 2; N. (Yellow-shafted) Flicker 5; Pileated Woodpecker 13; E. Wood-Pewee 1; Acadian Flycatcher 9; *Empidonax* sp. 2; E. Phoebe 24; Great Crested Flycatcher 11; E. Kingbird 16; Purple Martin 31; Tree Swallow 1; N. Rough-winged Swallow 21; Cliff Swallow 12; Barn Swallow 47; Blue Jay 41; Am. Crow 96; Fish Crow 2; Ca. Chickadee 52; Tufted Titmouse 25; White-breasted Nuthatch 3; Brown-headed Nuthatch 4; Ca. Wren 44; Blue-gray Gnatcatcher 34; E. Bluebird 69; Wood Thrush 21; Am. Robin 45; Gray Catbird 11; N. Mockingbird 9; Brown Thrasher 19; Cedar Waxwing 84; Eur. Starling 65; White-eyed Vireo 8; Solitary Vireo 8; Yellow-throated Vireo 4; Red-eyed Vireo 124; N. Parula 14; Yellow Warbler 6; Magnolia Warbler 1; Cape May Warbler 13; Black-throated Blue Warbler 10; Yellow-rumped (Myrtle) Warbler 14; Black-throated Green Warbler 11; Yellow-throated Warbler 3; Pine Warbler 22; Prairie Warbler 18; Blackpoll Warbler 2; Black-and-white Warbler 10; Am. Redstart 9; Prothonotary Warbler 1; Worm-eating Warbler 3; Swainson's Warbler 1; Ovenbird 17; La. Waterthrush 1; Com. Yellowthroat 21; Hooded Warbler 31; Yellow-breasted Chat 19; Summer Tanager 5; Scarlet Tanager 21; N. Cardinal 27; Blue Grosbeak 5; Indigo Bunting 94; Rufous-sided Towhee 32; Chipping Sparrow 38; Field Sparrow 2; Savannah Sparrow 1; Song Sparrow 11; White-throated Sparrow 5; Dark-eyed Junco 2; Red-winged Blackbird 15; E. Meadowlark 16; Com. Grackle 91; Brown-headed Cowbird 15; Orchard Oriole 8; N. (Baltimore) Oriole 3; House Finch 18; Am. Goldfinch 97; House Sparrow 8.
Total 103 species, 2021 individuals.
**Coordinator**: Steve Patterson, P.O. Box 27, Pelion, SC 29123. Participants: J. Abercrombie, E. Brown, Don Cox, D. Duncan, S. Kemper, J. Knox, Drew Lanham, Jill Patterson, Steve Patterson, M. Peason, Rick Phillips, Steve Wagner.

**Richland County, SC.** 8:00 AM to 8:00 PM. Temp 60° to 90° F. Wind W, 5 mph. AM clear; PM partly cloudy. Regular observers: 9 in field in 2 parties. Total regular party-hours 16.5; total regular party-miles 124; 10.5 hours and 4 miles on foot, 6 hours and 120 miles by car. Owling observers: 3 in 1 party. Owling party-hours 1; owling party-miles 10. Stationary observers: 2 in 1 party. Stationary party-hours 6.5. Totals: 24 party-hours, 134 party-miles, 11 participants.

Great Blue Heron 3; Green Heron 2; Yellow-crowned Night-Heron 3; Canada Goose 4; Wood Duck 2; Mallard 20; Black Vulture 12; Turkey Vulture 6; Mississippi Kite 1; Red-shouldered Hawk 3; Red-tailed Hawk 6; Wild Turkey 2; N. Bobwhite 1; Killdeer 1; Spotted Sandpiper 1; Ring-billed Gull 1; Rock Dove 38; Mourning Dove 60; Yellow-billed Cuckoo 4; E. Screech-Owl 2; Barred Owl 4; Com. Nighthawk 3; Chuck-will's-widow 1; Whip-poor-will 5; Chimney Swift 30; Belted Kingfisher 2; Red-headed Woodpecker 3; Red-bellied Woodpecker 17; Downy Woodpecker 3; Hairy Woodpecker 4; Red-cockaded Woodpecker 3; N. (Yellow-shafted) Flicker 8; Pileated Woodpecker 6; E. Wood-Pewee 6; Acadian Flycatcher 10; E. Phoebe 3; Great Crested Flycatcher 18; E. Kingbird 10; Horned Lark 4; Purple Martin 40; N. Rough-winged Swallow 50; Barn Swallow 15; Blue Jay 20; Am. Crow 10; Fish Crow 30; Ca. Chickadee 12; Tufted Titmouse 19; White-breasted Nuthatch 2; Brown-

headed Nuthatch 5; Ca. Wren 26; House Wren 1; Ruby-crowned Kinglet 1; Blue-gray Gnatcatcher 14; E. Bluebird 4; Gray-cheeked Thrush 1; Swainson's Thrush 1; Wood Thrush 9; Am. Robin 55; Gray Catbird 14; N. Mockingbird 50; Brown Thrasher 27; Loggerhead Shrike 4; Eur. Starling 29; White-eyed Vireo 15; Yellow-throated Vireo 5; Red-eyed Vireo 17; N. Parula 13; Yellow Warbler 1; Black-throated Blue Warbler 3, Yellow-rumped (Myrtle) Warbler 2; Yellow-throated Warbler 4; Pine Warbler 6; Prairie Warbler 7; Blackpoll Warbler 8; Am. Redstart 12; Prothonotary Warbler 4; Swainson's Warbler 3; Ovenbird 4; N. Waterthrush 2; La. Waterthrush 2; Kentucky Warbler 7; Com. Yellowthroat 10; Hooded Warbler 9; Yellow-breasted Chat 8; Summer Tanager 15; Scarlet Tanager 3; N. Cardinal 56; Rose-breasted Grosbeak 1; Blue Grosbeak 6; Indigo Bunting 14; Painted Bunting 1; Rufous-sided Towhee 15; Chipping Sparrow 20; Field Sparrow 1; White-throated Sparrow 1; Bobolink 2; Red-winged Blackbird 20; E. Meadowlark 10; Com. Grackle 34; Brown-headed Cowbird 12; Orchard Oriole 4; House Finch 75; Am. Goldfinch 4; House Sparrow 20.
Total 104 species, 1207 individuals.
**Coordinator**: Robin Carter, 4165 East Buchanan Drive, Columbia, SC 29206. Participants: Barbara Blaney, Robin Carter, John Cely, Steve Dennis, Caroline Eastman, Pat Ferral, Jerry Griggs, Malia Griggs, Gail Stephens, Gene Stephens, Elaine Stonecypher.

**Spartanburg County, SC.** 8:45 AM to 11:00 PM. Temp 70° F. Wind calm. AM light rain. Regular observers: 2 in field in 1 party. Total regular party-hours 2.5; total regular party-miles 2.5; 2.5 hours and 2.5 miles on foot. Totals: 2.5 party-hours, 2.5 party-miles, 2 participants.

Green Heron 1; Canada Goose 2; Wood Duck 4; Cooper's Hawk 1; N. Bobwhite 4; Killdeer 3; Solitary Sandpiper 2; Ring-billed Gull 1; Rock Dove 2; Mourning Dove 6; Chimney Swift 1; Ruby-throated Hummingbird 1; Willow Flycatcher 1; E. Phoebe 2; E. Kingbird 1; N. Rough-winged Swallow 4; Barn Swallow 9; Am. Crow 2; Ca. Wren 1; Blue-gray Gnatcatcher 1; E. Bluebird 3; Am. Robin 3; Gray Catbird 2; Brown Thrasher 2; Eur. Starling 4; Red-eyed Vireo 1; Yellow Warbler 1; Yellow-rumped (Myrtle) Warbler 1; Prairie Warbler 1; Palm Warbler 1; Com. Yellowthroat 4; Yellow-breasted Chat 1; N. Cardinal 2; Blue Grosbeak 2; Indigo Bunting 4; Chipping Sparrow 1; Field Sparrow 1; Savannah Sparrow 20; Grasshopper Sparrow 2; Song Sparrow 3; **White-crowned Sparrow 4**; Red-winged Blackbird 24; E. Meadowlark 6; Com. Grackle 14; House Finch 1; Am. Goldfinch 25.
Total 46 species, 182 individuals.
**Coordinator**: Pat Wilkison, 213 Windsor Drive, Shelby, NC. Participants: Joann Martin, Pat Wilkison.

**York County, SC.** 6:00 AM to 10:00 PM. Regular observers: 1 in field in 1 party. Total regular party-hours 1; total regular party-miles 1.5; 1 hour and 1.5 miles on foot. Owling observers: 1 in 1 party. Owling party-hours 1; owling party-miles 0. Stationary observers: 1 in 1 party. Stationary party-hours 16. Feeder watchers: 1 at 1 feeding station. Feeder watcher hours 1. Totals: 16 party-hours, 1.5 party-miles, 1 participant.

Green Heron 2; Canada Goose 4; Wood Duck 4; Mallard 1; Black Vulture 12; Turkey Vulture 18; Red-shouldered Hawk 2; Red-tailed Hawk 3; N. Bobwhite 2; Mourning Dove 7; Yellow-billed Cuckoo 2; Great Horned Owl 2;

Barred Owl 2; Chuck-will's-widow 1; Whip-poor-will 1; Chimney Swift 3; Ruby-throated Hummingbird 9; Belted Kingfisher 1; Red-bellied Woodpecker 2; Downy Woodpecker 2; N. (Yellow-shafted) Flicker 1; Pileated Woodpecker 1; Acadian Flycatcher 2; E. Phoebe 1; Great Crested Flycatcher 2; E. Kingbird 2; N. Rough-winged Swallow 2; Blue Jay 3; Am. Crow 18; Ca. Chickadee 11; Tufted Titmouse 8; Ca. Wren 10; House Wren 2; Blue-gray Gnatcatcher 2; E. Bluebird 11; Wood Thrush 4; Am. Robin 4; Gray Catbird 13; N. Mockingbird 3; Brown Thrasher 7; Cedar Waxwing 23; Loggerhead Shrike 2; Eur. Starling 7; White-eyed Vireo 3; Red-eyed Vireo 1; Cape May Warbler 1; Blackpoll Warbler 1; Black-and-white Warbler 1; Am. Redstart 8; Ovenbird 1; N. Waterthrush 7; Com. Yellowthroat 7; Yellow-breasted Chat 2; N. Cardinal 13; Blue Grosbeak 1; Indigo Bunting 11; Rufous-sided Towhee 16; Chipping Sparrow 2; Field Sparrow 1; Red-winged Blackbird 1; E. Meadowlark 3; Com. Grackle 3; Brown-headed Cowbird 5; House Finch 19; Am. Goldfinch 18.
Total 65 species, 344 individuals.
**Coordinator**: Bill Hilton, Jr., Hilton Pond, 1432 DeVinney Road, York, SC 29745. Participant: Bill Hilton, Jr.

**CBC Rare Bird Alert**
**(704) 332-BIRD**

# General Field Notes

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**NOTICE**

Publication of any unusual sightings of birds in the Field Notes or Briefs for the Files does not imply that these reports have been accepted into the official Checklist of Birds records for either North or South Carolina. Decisions regarding the official Checklists are made by the respective State Records Committees and will be reported upon periodically in THE CHAT.

## Apparent Predation of Common Grackle Fledgling by Eastern Chipmunk

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On 18 May 1993 I saw an Eastern Chipmunk (*Tamias striatus*) dragging a fledgling Common Grackle (*Quiscalus quiscula*) across a flower bed at my residence in suburban Greensboro, Guilford County, North Carolina. There is circumstantial evidence that the rodent killed the bird.

Initially my attention was directed to the activity at approximately 1645 h by loud distress calls typical of nestlings and young fledglings. Looking out the open window of our home office to the flower bed directly under the window, I saw the wings, body and legs of a black bird moving from right to left, and the body, back and tail of an Eastern Chipmunk apparently in the process of backing across the flower bed. I concluded that the chipmunk was holding the head of the bird in its teeth. From my vantage point about 4 m away, the bird and the chipmunk appeared to be approximately the same size. At the time I observed the activity, the bird was not vocalizing, but the wings appeared to be moving independently of the chipmunk's actions.

When I opened the front door, I saw the chipmunk running from the bird, which I identified as a recently fledged Common Grackle. The bird was approximately 2 m from the site of the initial observation. The head of the bird was lying in a pool of fresh blood approximately 3 cm in diameter. The fledgling

was clearly dead, and I observed no involuntary muscle contractions. I went back inside and returned in less than 5 minutes with a plastic bag for collecting the bird. When I opened the door, a chipmunk again ran from the general area of the carcass, leading me to believe that the same chipmunk had returned to its prey. However, the body had not been moved and there was no indication that the blood, which was still wet, had been disturbed.

As I was examining the dead bird, an adult Common Grackle flew into the tree above me and vocalized continuously. Common Grackles have nested in the adjacent yard for at least the last two years and this year have frequently taken dog food from the dishes in our back yard and carried it in the direction of several tall pine trees in the yard next door. In past years, adults sometimes have been accompanied by immatures at the dog dishes and bird feeders in my yard. The fledgling probably fell or flew from a nearby nest and blundered into the chipmunk's territory.

Several Eastern Chipmunks live in and around my yard. An active burrow is approximately 7 m from the spot where I saw the chipmunk with the fledgling, but it was dragging the bird away from that burrow, rather than toward it. However, I have often heard and seen a chipmunk in a natural area at the other side of the front yard. That is the direction in which the chipmunk appeared to be dragging the fledgling and toward which the chipmunk ran each time I opened the front door.

Assuming that the sounds I heard were indeed distress calls from the fledgling being dragged by the chipmunk and that the bird was alive when the chipmunk encountered it and dead when I examined it less than 2 minutes later, then there is strong circumstantial evidence that the chipmunk killed it. Although there is no proof that the chipmunk deliberately killed the fledgling grackle and intended to eat it, the activity observed does appear to represent a case of predation rather than attempted feeding on carrion.

Eastern Chipmunks are not popularly regarded as predators of birds, although other closely related members of Order Rodentia are known to take prey occasionally and to feed on carrion opportunistically. Potter (1992) reported observing a closely related species, a Gray Squirrel (*Sciurus carolinensis*), feeding on the carcass of a dead bird that had also attracted wasps. According to Webster, et al. (1985, p. 118), "The chief items of diet [of the Eastern Chipmunk] are seeds, nuts, acorns, and berries; they also may eat such animals as insects, small amphibians, and birds."

Other references to predation of birds by Eastern Chipmunks have not been found. The author would appreciate hearing from readers who have witnessed similar behavior or know of additional references in the literature.

## LITERATURE CITED

Potter, E. F. 1992. Wasps as scavengers on dead bird. Chat 56:80.

Webster, W. D., J. F. Parnell, and W. C. Biggs. 1985. Mammals of the Carolinas, Virginia and Maryland. Univ. of North Carolina Press, Chapel Hill, NC.

## Allopreening by Brown-headed Nuthatches in South Carolina

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On 4 January 1993 I was birding on the grounds of the Presbyterian Home in Summerville, Dorchester Co., South Carolina when I observed two Brown-headed Nuthatches (*Sitta pusilla*) engaging in mutual preening (allopreening). I noticed the first bird when it emerged from a nestbox attached to the top of a 1.5 m fence and flew to a small nearby pine tree. While I was watching this bird, a second nuthatch flew in from the same direction and moved into shoulder-to-shoulder contact with the first bird. The second bird then began preening the feathers on the nape and top of the head of the first bird. This interaction continued for about two minutes, during which time the recipient bird remained motionless in a slightly hunched forward position with its eyes half closed. My observations of this interaction ended when the first bird flew to the top of a distant pine and was immediately followed by the second bird. This incident occurred at 0930 h on a calm, sunny day with a temperature of about 18°C and was observed with 8x40 binoculars at a distance of about 15 m.

Apparently this is only the third report of allopreening in the Brown-headed Nuthatch. Norris (1958) reported this behavior for two adult birds in Georgia in late summer of 1951 and regarded this to be evidence of retention of the pair bond after the breeding season. Barbour and DeGrange (1982) reported allopreening for Brown-headed Nuthatches on 8 November 1975 in Florida and noted that this behavior had never been reported for the sexually dimorphic White-breasted and Red-breasted Nuthatches (*S. carolinensis* and *S. canadensis*), implying that allopreening as a mechanism for establishing and maintaining a long-term pair bond may be restricted to the monomorphic Brown-headed Nuthatch.

Although it is plausible to hypothesize that the allopreening noted in these three reports has a pair-bonding function, there is no firm evidence in any of these cases that the birds observed were indeed a mated pair or even of opposite sexes. The closely related Pygmy Nuthatch (*S. pygmaea*) exhibits complex social behavior such as flock foraging, communal roosting, and cooperative breeding (Knorr 1957, Sydeman, et al. 1988) and if the Brown-headed Nuthatch shares these traits, allopreening may function as a more generalized social bonding mechanism.

Acknowledgments: I thank the staff and residents of Presbyterian Home (Summerville) for their hospitality while birding on their grounds. D. A. McCallum suggested that allopreening may function in the broad context of general sociality in this species.

### Literature Cited

Barbour, D. B., and A. R. DeGrange. 1982. Reciprocal allopreening in the Brown-headed Nuthatch. Auk 99:171.

Knorr, O. A. 1957. Communal roosting of the Pygmy Nuthatch. Condor 59:398.

Norris, R. A. 1958. Comparative biosystematics and life history of the nuthatches *Sitta pygmaea* and *Sitta pusilla*. Univ. Calif. Publ. Zool. 56:119–300.

Sydeman, W. J., M. Guntert, and R. P. Balda. 1988. Annual reproductive yield in the cooperative Pygmy Nuthatch (*Sitta pygmaea*). Auk 105:70–77.

## Roof-nesting Least Terns from Craven County, North Carolina

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In the southeastern United States, Least Terns (*Sterna antillarum antillarum*) have typically nested on bare sand or shell substrates in open coastal areas (Bent 1963). In this note, the presence of roof-nesting Least Terns is documented from Craven County, North Carolina (35°06'N, 77°09'W).

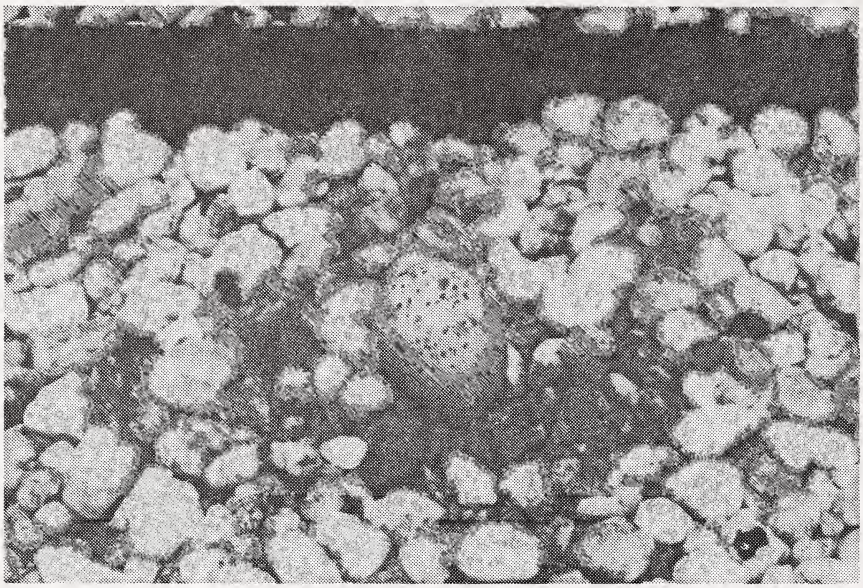

Figure 1. Nest and egg of Least Tern on roof in New Bern, Craven County, N.C. (Photo by author).

The roof-nesting terns were initially discovered in May 1989 at the Twin Rivers Shopping Mall in New Bern. Photographs of several nests were taken (Figure 1) and a survey of the roof revealed 8 nests with eggs. The single-story building contains several elevations of relatively flat roofs covered with tar and gravel (Figure 2). Air-conditioning units provide a source of shade and moisture near the condensation drains. The building is surrounded by pavement and the

closest open water creeks are Wilson Creek and the Trent River, both over a mile to the south of the nesting site. Observations of adults flying east from the site suggest the birds may be feeding in the Neuse River, approximately 3 miles away.

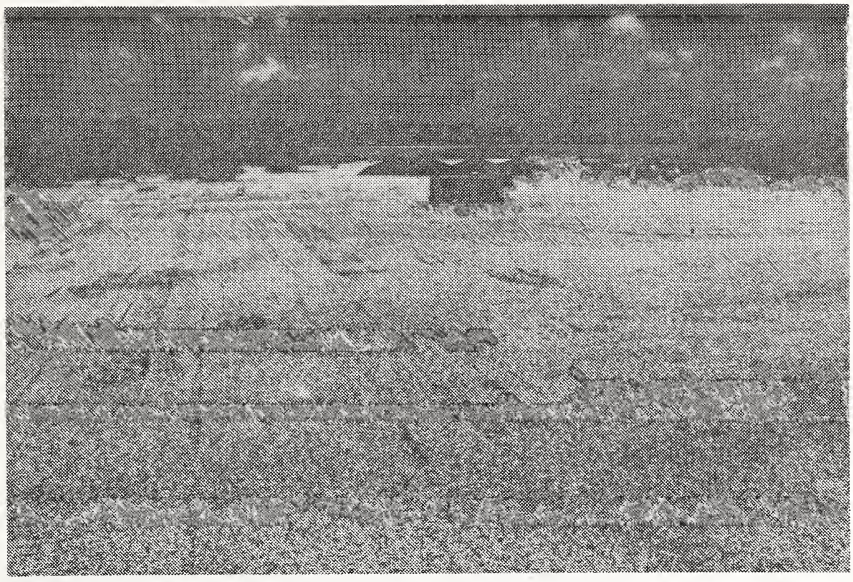

Figure 2. Habitat of roof-nesting Least Terns in New Bern, Craven County, N. C. (Photo by author).

Observations of courting birds, birds carrying fish to the site, and colony defense behavior suggest that nesting occurred in subsequent years (1990, 1991, 1992, 1993). Although the nests have not been surveyed since 1989, counts of adult birds indicate that colony size has been relatively stable. The success of the nesting birds is unknown. Fish Crows (*Corvus ossifragus*) appear to be common in the area and were seen being harassed by Least Terns on several occasions.

The roof-nesting colony represents not only an unusual nesting site, but also a location rather far inland. Least Terns were first documented nesting in the New Bern area near a quarry in 1988 (LeGrand 1989; Robert Holmes, pers, comm.). Birds seeking new sites away from traditional nesting areas suggest that favorable, undisturbed habitat along the coast is limited. Natural beaches, where many colonial waterbird species formerly nested, have been developed or are subject to human-related disturbances.

In recent years, nesting Least Terns have shifted from traditional beach sites (Soots and Parnell 1975). In 1976, 71.7% of Least Terns nesting in North Carolina were on dredged-material islands (Jernigan et al. 1978). The use of rooftops by nesting Least Terns has been documented in other states and is frequent in Florida (Fisk 1978a, Spendlow & Patton 1988). A 1975 survey of all nesting Least Terns on Florida's Atlantic coast estimated 21% (614 pairs) were in 16 roof colonies (Fisk 1978b). A survey of Least Terns in the Florida Keys

during 1987 found 692 pairs in 38 colonies; 71% of the birds and 38% of the colonies were on rooftops (Paul 1987). Over one-half of Maryland's Least Tern population nested on building roofs during 1991 (Armistead 1991). The opportunistic nesting behavior of the Least Tern may result in additional rooftop colonies in North Carolina.

## LITERATURE CITED


Armistead, H. T. 1991. Middle Atlantic Coast Region. American Birds 45(5):1101–1106.

Bent, A. C. 1963. Life histories of North American gulls and terns. U.S. Natl. Mus. Bull. 113. Dover Publ., New York. 337 pp.

Fisk, E. J. 1978a. Roof-nesting terns, skimmers, and plovers in Florida. Fla Field Nat. 6:1–8.

Fisk, E. J. 1978b. The growing use of roofs by nesting birds. Bird-Banding 49:134–141.

Jernigan, L. S., Jr., R. F. Soots, Jr., J. F. Parnell, and T. L. Quay. 1978. Nesting habits and breeding populations of the Least Tern in North Carolina. UNC Sea Grant Publ. UNC-SG-78-07. 39 pp.

LeGrand, H. E., Jr. 1989. Southern Atlantic Coast Region. American Birds 43(1):86–89.

Paul, R. T. 1987. Florida Region. American Birds 41(5):1425–1428.

Soots, R. F., Jr., and J. F. Parnell. 1975. Ecological succession of breeding birds in relation to plant succession on dredge islands in North Carolina. UNC Sea Grant Publ. UNC-SG-75-27. 91 pp.

Spendelow, J. A., and S. R. Patton. 1988. National atlas of coastal waterbird colonies in the contiguous United States: 1976–82. U. S. Fish Wildl. Serv. Biol. Rep. 88(5). x + 326 pp.


## BRIEFS FOR THE FILES


RICKY DAVIS

(All dates Spring 1993

RED-THROATED LOON: Usually single birds are found inland, so somewhat surprising was the presence of two in the Greensboro, N.C. area in late March to early April with one at Lake Townsend and one on Lake Brandt (Henry Link, Herb Hendrickson).

PACIFIC LOON: A bird was picked up at Atlantic Beach, N.C. and was taken to a local wildlife shelter on 24 March and was released on 3 April after being photographed and measured (Paul Spitzer). Another or the same individual was observed near Cape Lookout bight on 30 April by Spitzer (fide John Fussell). Also Derb Carter found a Pacific at Figure 8 Island on 18 April which was subsequently seen by Sam Cooper and Kevin Markham. This species is very rare in the Carolinas even though records are occurring more frequently in the last couple of years. Observers should

be very cautious and give thorough details when reporting Pacific/Arctic Loons.

RED-NECKED GREBE: Reports of this species in the Carolinas are always noteworthy, thus one at Huntington Beach State Park, S.C. in late March seen by Henry Armistead, et al. was a good find. The wintering "flock" of four in the Greensboro, N.C. area was present until mid-March (Henry Link).

SEABIRD OBSERVATIONS FROM THE OUTER BANKS OF NORTH CAROLINA. Birds indicated by () were seen by only a handful of observers on these trips.

A off Oregon Inlet(Pterodroma Ptours)
B off Hatteras(Robert L. Ake and party)
C off Oregon Inlet(Virginia Museum and party)
D off Oregon Inlet(OBServe Tours)
E Off Oregon Inlet(OBServe Tours)
F from Cape Hatteras Point, Buxton(Ned Brinkley)
G off Hatteras(Pterodroma Ptours)
H off Hatteras(Pterodroma Ptours)
I off Hatteras(Pterodroma Ptours)

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| May | 15 | 18 | 20 | 21 | 22 | 28 | 29 | 30 | 31 |
| N. Fulmar | 1 | | | | | | | | |
| Herald Petrel | | | | | (1) | | | | |
| Black-cap. Petrel | 82 | 114 | 110 | 150 | 120 | | 42 | 1 | 74 |
| Cory's Shearwater | 9 | 9 | 29 | 35 | 15 | 479 | 83 | 24 | 56 |
| Greater Shearwater | | 1 | 5 | 2 | 2 | 1 | 6 | 2 | 6 |
| Sooty Shearwater | 2 | 1 | 6 | 45 | 40 | 112 | 7 | 6 | 4 |
| Manx Shearwater | | 1 | | | | 2 | | | |
| Audubon's Shearwater | 5 | 2 | 15 | 3 | 1 | | 15 | 3 | 5 |
| Wilson's St.-Petrel | 875 | 15 | 150 | 85 | 70 | | 150 | 20 | 47 |
| Leach's St.-Petrel | | 5 | 12 | 3 | 1 | 1 | 3 | 2 | 84 |
| Band-r. St.-Petrel | | | 3 | 1 | | | | | 7 |
| White-t. Tropicbird | | | 1 | | | | | | |
| N. Gannet | | | 1 | | | 60 | | 9 | |
| Red Phalarope | | | 1 | | | | | | |
| Red-n. Phalarope | 35 | | | 1 | 7 | | | | |
| Pomarine Jaeger | 7 | 3 | 27 | 2 | | 1 | 2 | | 3 |
| Parasitic Jaeger | 3 | | | | | 2 | 2 | | 2 |
| Long-t. Jaeger | | | | | | | | 1 | 2 |
| S. Polar Skua | | | | | | | 1 | | |
| Common Tern | 11 | 1 | | | | | 8 | | |
| Bridled Tern | 2 | 3 | 6 | | | | 2 | | |
| Sooty Tern | 1 | | 3 | | | | | | 2 |
| jaeger sp. | 5 | | | | | 1 | | 1 | 2 |
| large storm-petrel | | | | | | | | 1 | 2 |
| large shearwater | | | | | | 150 | | | |
| small shearwater | | | | | | 4 | | | |

EARED GREBE: There were three reports of this rare but regular species this spring with the best count being the seven that wintered at a Sumter, S.C. sewage pond and were present until April (Lex Glover, Evelyn Dabbs, Harrold and Velma Blevins). One at Lake Crabtree near Raleigh, N.C. on 18 March was observed by Doug Shadwick. Also a winter plumaged bird was photographed by Sam Cooper and Kevin Markham at Aurora, N.C. on 7 April.

HORNED GREBE: Late were two at Portsmouth, N.C. through May (Steve Dinsmore) and one at Cape Hatteras also to the end of May (Harry LeGrand, Mike Tove, Steve Dinsmore).

NORTHERN FULMAR: Two off of Cape Lookout, N.C. 3 April were seen by Allen Bryan. A little late were one found dead on Portsmouth Is. 13 May by Steve Dinsmore and one off Oregon Inlet 15 May by Mike Tove, et al.

BLACK-CAPPED PETREL: This species was seen in usual numbers on almost all offshore trips in North Carolina. Three found off of Charleston, S.C. 29 May, by Lex Glover, Steve Patterson, et al. were somewhat more noteworthy.

HERALD PETREL: The only report for this spring was of one seen by one person on a 22 May trip off of Oregon Inlet (OBServe Tours).

GREATER SHEARWATER: Ned Brinkley counted an astonishing 221 flying past Cape Hatteras point on 3 June. This species has been more evident in North Carolina waters this season than in the past several years.

MANX SHEARWATER: This species was reported on one offshore trip in May; on the 18th off of Hatteras (Bob Ake, et al.). More surprising were two on the 28th and two on 3 June seen from shore at Cape Hatteras Point by Ned Brinkley!

CORY'S SHEARWATER: On 3 June, Ned Brinkley observed a large movement of shearwaters flying past Cape Hatteras Point with a total of 866 Cory's being most impressive.

WILSON'S STORM-PETREL: The high count for the spring occurred somewhat early on 15 May with 875 being seen off of Oregon Inlet by Mike Tove, et al.

BAND-RUMPED STORM-PETREL: This species was seen on several trips off of North Carolina with a peak of 7 being seen off Hatteras 31 May by Mike Tove, et al.

LEACH'S STORM-PETREL: This species seemed unusually common this spring with a record count of 84 being tallied off of Hatteras on 31 May by Mike Tove, et al.

WHITE-TAILED TROPICBIRD: An immature off Oregon Inlet, N.C. on 20 May by the Virginia Museum party was the only spring report.

NORTHERN GANNET: Twelve seen from Cape Hatteras Point on 31 May by Andrew Fix was a good count for this late in the season.

BROWN PELICAN: Russ Tyndall found two at a sandpit north of Greenville, N.C. on 20 March for a rare "inland" record.

GREAT CORMORANT: One photographed at the west end of Lake Phelps, N.C. this spring by John Fussell was an unusual inland record for this mostly coastal species. Also one was a little late at Huntington Beach State Park, S.C. on 25 May by Jack Peachey.

ANHINGA: Two were seen soaring over Chapel Hill and Durham, N.C. on 2 May by several lucky observers. This species is quite rare in this region of the state.

LEAST BITTERN: Always good finds, two were seen inland this spring: one in a clearcut ditch(!) near Tarboro, N.C. on 1 May by Ricky Davis and one on the Durham, N.C. spring count on 25 April by Norm Budnitz and Bryan Bomberg.

YELLOW-CROWNED NIGHT-HERON: For the third year in a row, nesting occurred in a Winston-Salem, N.C. park, with four young fledging, (Ramona Snavely, et al.). Also an adult was photographed at Jackson Park, Hendersonville, N.C. in April by Wayne Forsythe for a rare record.

REDDISH EGRET: This species was again present in North Carolina this spring with 2 near Harker's Island 28 May by Paul Spitzer, fide John Fussell, and a breeding plumaged dark phase bird at Drum Inlet in early May by Steve Dinsmore.

MUTE SWAN: Eric Dean found 6 free-flying birds at the Goldsboro Wastewater Treatment Ponds on 26 April. These "apparently wild" birds left the following morning!

RING-NECKED DUCK: A female lingered through May at Lake Louise, Weaverville, N.C. as noted by Ruth Young.

COMMON EIDER: Reports of this species were numerous with one to three birds found in the Cape Hatteras area all season (m. ob.); one at the Whalebone pier, Nags Head until mid-March (Ricky Davis, John Wright); three at Ft. Fisher on 3 April (Ralph Widrig); four at Cape Lookout in late April and early May (Paul Spitzer et al.); four at Portsmouth on 21 April (Steve Dinsmore); and one at Murrell's Inlet, S.C. on 18 April (Reg Daves, et al.).

WHITE-WINGED SCOTER: One at Greensboro, N.C. on 13 March as noted by Henry Link was locally uncommon.

BLACK SCOTER: Steve Dinsmore found 3 late birds at Portsmouth on 11 May.

HOODED MERGANSER: A female with 6 young were seen in the Lumber River north of Fair Bluff, N.C. on 12 May by Tom Howard. This species is an irregular breeder in the Carolinas.

COMMON MERGANSER: Good counts of this species were 11 on Lake Gaston on 28 March (Roger McNeill) and 27 at Falls Lake on 14 March (Steve Dinsmore and Jeremy Nance). One also lingered at Jordan Lake to be found on the Spring Count on 9 May (Barbara Roth).

RED-BREASTED MERGANSER: There were also excellent counts of this Merganser in the Raleigh area in March with 30 at Lake Crabtree on the 25th (Doug Shadwick), 11 at Lake Wheeler on the 28th (Ricky Davis), and 45 at Jordan Lake on the 28th (Ricky Davis). Could these totals be related to the "Blizzard" of '93 in mid-March grounding early migrants?

RUDDY DUCK: A late bird was found at Lake Mattamuskeet by Allen Bryan on 28 May.

TURKEY VULTURE: An individual of this species was found at Portsmouth on 16 May for a locally unusual record (Steve Dinsmore).

SWALLOW-TAILED KITE: As usual, kites were present in the Buxton, N.C. area with up to 5 present during late May (Eric Barbee, fide Steve

Dinsmore). Dinsmore also found birds at Portsmouth with one on 30 April, two on 2 May, and 2 on 11 May. Phil Spivey and John Brunjes found one in Brunswick County, N.C. on 12 March, a somewhat early record (fide Eloise Potter).

MISSISSIPPI KITE: This species seems to be increasing somewhat with birds being found in Halifax County on 23 May (Ricky Davis), Goldsboro on 31 May (Eric Dean), Cedar Island on 24 April (John Fussell, et al.), and Pea Island, N.C. on 28 May (Andrew Fix and Dan Hayes, fide Steve Dinsmore). In South Carolina, two were seen at Magnolia Gardens, Charleston on 22 May by Simon Thompson, and an impressive group of 40+ were found near the Great Pee Dee River, Marlboro County on 23 May by Bob Wood.

BROAD-WINGED HAWK: A pair seen copulating near Parksville, S.C. on 28 April provided a rare local breeding record (Anne Waters). Rare migrants were observed at Portsmouth by Steve Dinsmore with 4 on 11 May and one on 25 & 27 May. Simon Thompson reported that the best count in the Tryon area this spring was of 20 on 14 April.

BALD EAGLE: An immature flying north over Tryon on 20 May was a locally uncommon occurrence (Simon Thompson).

PEREGRINE FALCON: Inland reports this spring included one over Eno River State Park , N.C. on 23 March (Scott Hartly) and one east of Conway, S.C. on 12 April (Jack Peachey). A late bird was found at Portsmouth on 19 May by Steve Dinsmore and Jeremy Nance.

MERLIN: Somewhat late were two on 12 May and one on 13 May at Portsmouth (Steve Dinsmore), and one at North Pond, Pea Island on 14 May by Ricky Davis.

BLACK-BELLIED PLOVER: A breeding plumaged bird was found in a field in Winston-Salem, N.C. on 19 May (Ramona Snavely, Reggie Burt, et al.) for the only inland report.

SEMI-PALMATED PLOVER: At Portsmouth, Dinsmore had an impressive peak count of 825 on 11 May.

BLACK-NECKED STILT: This species seems to be reported more frequently than in the past, with possible breeding birds found at several sites. John Fussell found one at Piney Island on 25 May; Fussell, Steve Dinsmore, and Paul Spitzer found 8 at Davis Impoundment in May; and a pair was calling at Portsmouth on 7 May (Steve Dinsmore). Four Stilts at Southport, N.C. on 31 March were unusual (John Fussell), as was one at Huntington Beach State Park, S.C. on 26 May, seen by Jerry Johnson. The most amazing report though, was the count of 200+ at the Savannah River Spoil Site on 29 May by Graham Dugas et al. This must be a record count for the Carolinas.

AMERICAN AVOCET: The count of 35 to 40 at the Savannah River Spoil Site on 29 May was an excellent total for spring (Graham Dugas, et al.).

UPLAND SANDPIPER: The only reports recieved for the spring were 2 at the Cherry Hospital grounds, Goldsboro in April (Eric Dean), 5 at a Guilford County airport on 17 April (Henry Link), and an early migrant at the Savannah River Spoil Site on 1 April (Lex Glover and Pat McDowell).

WHIMBREL: John Fussell saw an aberrant individual at Bird Shoal near Beaufort, N.C. on 15 May which had white on the upper back and shoulder.

Observers should be cautious in reporting such birds as the European race has a white back also.

LONG-BILLED CURLEW: The Ft. Fisher, N.C. bird was last seen for the season on 8 April by Ralph Widrig.

BAR-TAILED GODWIT: The Portsmouth flats seem to be the best spot in the Carolinas for finding this rare shorebird. Steve Dinsmore found and photographed two birds on 23 April, with one of these birds still being found until 9 May. This is the second spring record for the state, following one bird at the same area last year.

SEMI-PALMATED SANDPIPER: An amazing total of 10,000+ was estimated at the Savannah River Spoil Site on 29 May by Graham Dugas et al. One wonders: if there were this many Semis around, how many of the other peeps were present?!

WHITE-RUMPED SANDPIPER: Paul Spitzer counted 100 at Davis Impoundment on 31 May for an excellent local total.

CURLEW SANDPIPER: Steve Dinsmore found one on 12 May and another on 24 May at Portsmouth for the only spring N.C. reports. In South Carolina, where decidedly less common from year to year; one bird on 15 & 16 May and another individual on 27 May were found at the Yawkey Wildlife Center, Georgetown County by Lex Glover, Jim Lyons, John Cely, Donna and Dennis Forsythe, Nathan Dias, et al.

SHORT-BILLED DOWITCHER: The only inland report came from Eric Dean who found 5 at the Goldsboro Wastewater Treatment Ponds on 3 May.

RED PHALAROPE: The Morehead City, N.C. area had several records with one found dead at Ft. Macon on 14 March (John Fussell), a breeding plumaged bird on Shackleford Banks on 2 May (Paul Spitzer, et al.), and an injured bird which later died, at Ft. Macon on 16 May (fide Randy Newman). In South Carolina, a bird was present at Huntington Beach State Park from the 18th to the 22nd of March (the Doyles, fide Henry Armistead; Jack Peachey). The only offshore report occurred off Oregon Inlet on 20 May by Ken Bass, Mike Austin, and Jim Beard.

RED-NECKED PHALAROPE: A male and female in breeding plumage were found at the Savannah River Spoil Site on 29 May by Graham Dugas, et al.

WILSON'S PHALAROPE: The only reports came from the Core Banks area with one male on 9 May at Drum Inlet, one male photographed on 9-11 May at Portsmouth, and a female at Portsmouth on 21 May (Steve Dinsmore).

POMARINE JAEGER: There were the usual scattering of onshore reports, but the best count came off of Oregon Inlet on 20 May when Ken Bass, Mike Austin, and Jim Beard had a total of 27.

PARASITIC JAEGER: From shore, a good count of 8 at Cape Hatteras Point on 31 May was seen by Andrew Fix. But even better were the 15 (mostly Parasitics) jaegers observed at Ft. Fisher by Ralph Widrig on 13 March during the "Blizzard" of '93!

LONG-TAILED JAEGER: The only reports this spring were one on 30 May and two on 31 May off Hatteras by Mike Tove, et al. This jaeger has been harder to come by the last couple of seasons.

SOUTH POLAR SKUA: One off Hatteras 18 May (Bob Ake, et al.) and another off Oregon Inlet 29 May (Mike Tove, et al.) were the only offshore reports. Surprisingly, there was an onshore sighting with Ned Brinkley observing a bird flying close to shore and on the water at Cape Hatteras Point on 3 June.

GREAT SKUA: This species is very rare in North Carolina waters, thus an individual which was photographed 30 miles east of Cape Lookout on 3 April by Allen Bryan was exciting.

LAUGHING GULL: Uncommon inland transients were found at Goldsboro on 24 April by Eric Dean and at Jordan Lake on 9 May by Mike Schultz et al.

LITTLE GULL: Early March is often the best time to find this rare gull in Bonaparte's Gull flocks along the coast, so one at Cape Hatteras Point on 7 March by Russ Tyndall was not unexpected.

COMMON BLACK-HEADED GULL: An adult in breeding plumage was photographed by Sam Cooper and Kevin Markham at the Aurora Ferry landing on 7&8 April for a rare record of this plumage in North Carolina.

RING-BILLED GULL: An unusual occurrence was of one flying over the Blue Ridge Parkway at the US 276 exit on 8 May by Lex Glover et al. This species is rarely recorded from the upper elevations of the mountains.

GLAUCOUS GULL: The only spring report was of one first-winter plumaged bird at the Dare County landfill on 9 April by Steve Dinsmore.

LESSER BLACK-BACKED GULL: This species continues to be found in North Carolina through late spring with a first summer individual at Portsmouth on 25 May (Steve Dinsmore). In South Carolina this species is increasing also, and several birds at the Horry County landfill during March and April were noteworthy (Jack Peachey).

SABINE'S GULL: A very early migrant was found 30 miles east of Cape Lookout on 13 April by Bob Holmes. This bird was in breeding plumage and must have been a pleasant surprise for the observer!

ROSEATE TERN: As usual, the Cape Hatteras Point area had reports of this species with two there on 16 May (Ricky Davis) and three on 19 May (Bob Ake, et al.). Also a color banded bird was seen at Portsmouth on 11 May by Steve Dinsmore and another bird was a New Drum Inlet on 15 May (Steve Dinsmore and Jeremy Nance).

ARCTIC TERN: On a trip off of Cape Lookout on 13 April, Bob Holmes found an extremely early Arctic. This was the only report for the whole spring season, with none being found during the normal late May to early June migration period!

SOOTY TERN: The dependable bird at the Cape Hatteras Point tern colony was first seen on 16 May by Ricky Davis.

BLACK TERN: The only inland migrants reported were 5 at Goldsboro on 4 May as noted by Eric Dean.

RAZORBILL: This species was noted more than usual during the winter period and this trend continued into early spring. One was seen flying north on 18 March and another on 20 March at Ft. Fisher by Ralph Widrig. Also on the 20th of March, one was observed flying north at Figure Eight Island by Derb Carter. This possibly was the same bird seen that day at Ft. Fisher!

BLACK-BILLED CUCKOO: This species was reported several times in North Carolina with singing birds noted at Brevard on 7 May (Bob Holmes, et

al.), Jordan Lake on 9 May (Barbara Roth), Alligator River on 14 May (Haven Wiley and Todd Hass), Goldsboro on 15 May (Eric Dean), Chimney Rock Park on 16 May (Simon Thompson), and near Atlantic on 27 May (John Fussell).

COMMON BARN-OWL: A nest with 5 eggs was found in northern Guilford County during May (Herb Hendrickson) and was being monitored for success.

NORTHERN SAW-WHET OWL: This species was found several times during the spring in the Devil's Courthouse area of the Blue Ridge Parkway in May. On the 5th, Bob Holmes and Wade Fuller heard three and saw one of these.

CHIMNEY SWIFT: A count of 100 on 2 May at Portsmouth was an unusually large number for that area in spring (Steve Dinsmore).

RUFOUS HUMMINGBIRD: An adult male was present at a Beaufort, N.C. feeder from late March to about 18 April as reported by Dick Meelheim, Larry Crawford, John Fussell, and others.

OLIVE-SIDED FLYCATCHER: This rare migrant was found three times in North Carolina with one (heard only) at Mt. Mitchell State Park on the early date of 25 April by Russ Tyndall; one photographed in a Greensboro yard on 7 May (Henry Link, fide Roger McNeill); and one seen and heard near Salem Lake, Winston-Salem, 20-23 May by Lloyd Ramsey et al.

EASTERN KINGBIRD: One was a little early at Cape Lookout on 30 March as seen by Paul Spitzer.

GRAY KINGBIRD: In North Carolina many years go without a single report of this rare species-this spring was different, there were two birds found! One was at Sunset Beach in early April and was seen by Russ Tyndall, Roger McNeill, Todd Hass and several other observers. Another was at Portsmouth on 24&25 May (Steve Dinsmore). Both birds were photographed to document the sightings.

SCISSOR-TAILED FLYCATCHER: On 23 May, Paul Boone observed one near Campobello, S.C. and on the 27th of May one was seen near Broad River in Chester County, S.C. by Tim Kalbach. These two locations are not too far from each other and these sightings could easily represent one individual.

HORNED LARK: During the whole spring season, two or 3 near Hubert, Onslow County, N.C. were very unusual for an area so near the coast. The birds acted territorial and appeared to be nesting (John Hammond).

NORTHERN ROUGH-WINGED SWALLOW: A very unusual occurrence was one at Portsmouth 25 May as noted by Steve Dinsmore. This species does not nest in that area and the date was late for a migrant.

CLIFF SWALLOW: This species continues to increase as a breeder at inland lakes, with 100+ nests found at High Rock Lake Dam and bridges on 27 April by Steve Coggin. There were many other reports of nesting activity throughout the Carolinas. Also the species was found at several coastal sites as migrants such as Cape Hatteras Point, Portsmouth, and Cedar Island.

FISH CROW: The presence of 7 on 1 May at a Forsyth County landfill provided a 3rd county record (Bill, Susan, and John Hammond). Not quite as far inland were 3 at Lake Tillery on 8 April as seen by Harry LeGrand.

COMMON RAVEN: A northern Forsyth County quarry has hosted a nesting pair of Ravens for several years in a row, and this year 4 young fledged successfully (Ramona Snavely).

RED-BREASTED NUTHATCH: In a winter season which produced very few reports of this species, a surprise was one found at Carolina Beach State Park on 17 April by a Carolina Bird Club field trip.

GOLDEN-CROWNED KINGLET: One singing on territory near Buck Creek, Clay County, on 10 May was possibly a first "summer" record for the county (Harry LeGrand). The elevation was 3500 feet.

EASTERN BLUEBIRD: Russ Tyndall found a bluebird at Ivester Gap in the Shining Rock Wilderness Area on 7 May for a high (5680') elevation record.

VEERY: A very late date for this species was one banded by Bill Hilton at York, S.C. on 2 June.

AMERICAN PIPIT: There's nothing like a good snowstorm to stress out ground-feeding birds such as pipits! The March "Blizzard of 93" was no exception. In Guilford County, N.C., where pipits are normally hard to come by, several hundred birds appeared along cleared roadsides (Herb Hendrickson, Henry Link) and at least 100 remained at an airport into early April (Henry Link).

SOLITARY VIREO: LeGrand found singing birds at several sites in Montgomery and Moore counties this spring which shows a good population for this lower Piedmont area.

"BREWSTER'S" WARBLER: This hybrid of the Blue-winged and Golden-winged Warblers was reported twice: one near the Tar River in Nash County on 28 April (Ricky Davis), and one at Pea Island on 16 April by Len and Esther Pardue. The Pea Island bird was an unusual find for the Outer Banks in spring.

NASHVILLE WARBLER: The only report received for the season was of one singing along the Parkway south of Ashville on 7 May by Ricky Davis.

CHESTNUT-SIDED WARBLER: A locally rare spring transient was found at Eagle Island near Wilmington on 23 May by Sam Cooper and Bob Merrick. Also locally noteworthy were 2 singing males on territory at Chimney Rock Park during mid-May by Simon Thompson.

MAGNOLIA WARBLER: A late migrant was banded at York, S.C. on 2 June by Bill Hilton.

CAPE MAY WARBLER: A bird found near Lynn, N.C. on 1 March was most certainly an overwintering individual instead of being an early migrant (Simon Thompson).

YELLOW-RUMPED "AUDUBON'S" WARBLER: Always a good find in the Carolinas, one was seen in Edgecombe County on 25 April by Ricky Davis. The bird was a female with a very obvious, bright yellow throat.

PINE WARBLER: One to two were present in early March at Ruth Young's feeder in Fairview, N.C. for a locally uncommon occurrence.

CERULEAN WARBLER: Rare transients were one at Raleigh on 6 May (Steve Dinsmore and Jeremy Nance) and one along the Tar River in Nash County on 3 May (Ricky Davis). Exciting was the discovery of a female sitting on her nest over the Parkway north of Ashville on 7 May by Ricky Davis. Very few nests of this species have been found by observers in the

state. The Tryon, N.C. area has a rather healthy population of breeding Ceruleans with 8+ at White Oak Mountain on 8 May (Harry LeGrand and CBC group).

BLACK AND WHITE WARBLER: An early migrant was found at Buxton, N.C. on 22 March by Keith and Diane Andre. A rare record was of a singing male acting territorial in the Green Swamp area of Brunswick County, N.C. on 30 May (Ricky Davis). In South Carolina, the species seems to be doing well as a breeder in the Piedmont counties of Abbeville and McCormick, as noted during Atlas Block work done by Tim Kalbach and Anne Waters.

AMERICAN REDSTART: Lex Glover found 2 singing males in the Congaree National Monument, Richland County, S.C. on 31 May. The breeding limits of this species are spotty in the Coastal Plain of both Carolinas.

PROTHONOTARY WARBLER: One at Jackson Park, Hendersonville on 18 April (Wayne Forsythe) and one at Lake Adger, north of Tryon on 26 May (Simon Thompson) were rare local records.

SWAINSON'S WARBLER: What must have been one of the earliest records for North Carolina (away from the southeastern coast); was of a singing Swainson's in northeastern Edgecombe County on 4 April (Ricky Davis).

WORM-EATING WARBLER: Coastal Plain populations of this species are always of interest, thus a singing male in the Francis Marion National Forest on 28 May provided a locally uncommon record (Lex Glover).

KENTUCKY WARBLER: A singing male in Buxton woods near Cape Hatteras on 1 June was perplexing as to what it was doing there on that date (Paul Sykes).

WILSON'S WARBLER: One at Freedom Park, Charlotte on 7 May (Kevin Hennings) and one at Beaver Lake Sanctuary, Ashville on 8 May (Ruth Young) were the only reports for the spring.

YELLOW-BREASTED CHAT: Obviously a migrant, one at Portsmouth in late April and early May provided an unusual record for that locality (Steve Dinsmore).

BLUE GROSBEAK: An early migrant was found at Zebulon, N.C. on 5 April by Ricky Davis.

INDIGO BUNTING: Many observers reported on the apparent abundance of this species across the Carolinas; with Bill Hilton of York, S.C. banding far above his average for the spring.

PAINTED BUNTING: A rare record for the Outer Banks of North Carolina occurred on 11 April when a pair showed up at a feeder in Frisco as noted by Betty Rahn.

DICKCISSEL: The only report received was of 3 birds at the Cherry Hospital area near Goldsboro, N.C. (Eric Dean). The birds (2 males and one female) were present from 15 May through the period and were apparently attempting to nest.

BACHMAN'S SPARROW: Good local records for Piedmont South Carolina were singing birds near Ware Shoals, Greenwood County (Pete Worthington), near Jonesville, Union County on 23 May (Tim Kalbach), and near Waterboro, Laurens County on 19 May (Tim Kalbach).

AMERICAN TREE SPARROW: A single individual of this species was found near Falls Lake on 14 March by Steve Dinsmore. Any record of this species in North Carolina is very noteworthy.

VESPER SPARROW: This hard to find sparrow was reported three times in North Carolina with two near Jordan Lake on 8 April by Len Pardue, 7 at Tryon on 20 March by Simon Thompson, and one at Fairview on 27 March by Ruth Young.

LARK SPARROW: One bird at Piver's Island near Beaufort, N.C. on 1 April was seen by Paul Spitzer for a rare spring record.

LINCOLN'S SPARROW: A rare spring record for the Piedmont was one at Mason Farm, Chapel Hill, N.C. on 3 April by Len and Esther Pardue and Pat Coin.

SNOW BUNTING: Russ Tyndall found 6 at Cape Hatteras Point on 7 March for the only spring report. These were obviously part of the flock that wintered there.

BOBOLINK: During the period of 5-20 May, a male and 3 females were in a western Forsyth County field (Tom Mowbray, m. ob.). The male was defending a territory, showing possible breeding activity. On the locally unusual side, a flock of five at Portsmouth on 15-19 May was seen by Steve Dinsmore.

NORTHERN ORIOLE: A nesting pair located in a southern Greensboro area during May was pushing the breeding limits east (Herb Hendrickson).

PURPLE FINCH: This species had an influx of individuals in mid-March as noted by banders in South Carolina. Lex Glover banded good numbers in Lugoff between 28 March and 4 April, while Bill Hilton reported how they "came on strong" in March at York.

RED CROSSBILL: Three were seen flying over Heintooga parking area in the Smokies on 21 May by Roger McNeill for the only spring report.

PINE SISKIN: It was a "non-winter finch" year, but singles were noted at two separate feeders in the Greensboro area in March (Jean McCoy, Herb Hendrickson); a single at a feeder in Mayesville, S.C. through mid-April (Lex Glover); and two at Tryon on 20 April (Simon Thompson).

Spring reports (March through May, 1994) for Briefs for the Files should be sent to the "Briefs" editor (for address see front inside cover) by May 20, 1994.

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(USPS 101-020)

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Quarterly Bulletin of Carolina Bird Club, Inc.
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Quarterly Bulletin of Carolina Bird Club, Inc.
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# THE CHAT

(USPS 101-020)
VOL.58 SUMMER 1994 NO. 3
Published by the Carolina Bird Club, Inc.

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THE CHAT (USPS 101-020) is published quarterly by the Carolina Bird Club, Inc., with headquarters at the North Carolina State Museum of Natural Sciences, 102 N. Salisbury Street, Raleigh, NC 27603 POSTMASTER: Send address changes to Carolina Bird Club, THE CHAT, P. O. Box 29555, Raleigh, N. C. 27626-0555.

PAGE CHARGES: Authors who have funds available for page charges are requested to remit same at the rate of $40.00 per page. CBC Headquarters will provide statements required for your business records.

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CBC

# 46-year Trends of Wintering Nine-primaried Oscines in Urban and Rural Areas of the North Carolina Piedmont

H. T. HENDRICKSON and PEGGY FEREBEE

Abstract.—Forty-six years of Christmas Bird Counts were analyzed to determine population trends for 17 species of nine-primaried oscines in the Piedmont region of North Carolina. Comparisons of composite trends from seven count circles in six urban counties and twelve count circles in eleven rural counties revealed that: 1) avian populations are more likely to change in urban areas than in rural areas; 2) the declining populations outnumber the increasing ones; and 3) a majority of the increasing species are ones regarded as pests.

## INTRODUCTION

Most ornithologists believe that as an area becomes urbanized local bird populations change because of changes in vegetation, alteration of food resources and other modifications of the habitat (Terborgh 1980, Welty 1982, Odum 1983, Mills, et al. 1989, Temple and Wiens 1989). The Piedmont region of North Carolina is an area that has experienced a significant increase in the number of humans since 1940. While the human population in the state has grown from 3,571,623 in 1940 to 6,628,637 in 1990 (almost doubled), some Piedmont counties have more than tripled their human populations (Table 1).

Table 1

| Circle Name | County | Human Numbers 1940 | Human Numbers 1990 | % Change | Human Density 1990 | No. Yrs. CBC Run |
|---|---|---|---|---|---|---|
| Alamance Co. | Alamance | 57,427 | 108,213 | +88% | 97 | 1 |
| Concord | Cabarrus | 59,353 | 98,935 | +66% | 105 | 2 |
| Lenoir | Caldwell | 35,795 | 70,709 | +97% | 58 | 23 |
| Chapel Hill | Orange | 23,072 | 93,851 | +306% | 91 | 44 |
| Elkin/Ronda | Surry | 41,783 | 61,704 | +47% | 44 | 24 |
| Henderson | Vance | 29,961 | 38,892 | +30% | 60 | 25 |
| Statesville | Iredell | 50,424 | 92,931 | +84% | 62 | 21 |
| Jordan Lake | Chatham | 24,726 | 38,759 | +56% | 21 | 14 |
| Pilot Mountain | Surry | 41,783 | 61,704 | +47% | 44 | 4 |
| Roanoke Rapids | Halifax | 56,512 | 55,516 | -2% | 30 | 17 |
| Rockingham Co. | Rockingham | 57,898 | 86,064 | +48% | 58 | 17 |
| New London | Stanly | 32,834 | 51,765 | +57% | 50 | 22 |
| Charlotte | Mecklenburg | 151,826 | 511,433 | +236% | 374 | 46 |
| Durham | Durham | 80,244 | 181,835 | +126% | 235 | 25 |
| Gastonia | Gaston | 87,531 | 175,093 | +100% | 189 | 9 |
| Greensboro | Guilford | 153,916 | 347,420 | +126% | 206 | 46 |
| High Point | Guilford | 153,916 | 347,420 | +126% | 206 | 8 |
| Raleigh | Wake | 109,544 | 423,380 | +286% | 191 | 46 |
| Winston-Salem | Forsyth | 126,475 | 265,878 | +110% | 249 | 45 |

This pattern has been repeated in many parts of eastern North America as urban areas expand into rural areas (Guilford County Planning Department 1986). As people move, they convert open agricultural land and woodlots into more densely populated and differently planted residential and industrial areas.

Changes in local bird populations are often discussed in conjunction with the annual Audubon Christmas Bird Counts. At meetings to tabulate the counts, longtime observers often report that bird species in their traditional count territories seem to be declining. Some of these areas, which were once forested or lightly inhabited, are now residential neighborhoods. In some cases the area itself seemed the same, but some bird species, once counted there regularly, had declined in numbers or were completely missing. Regional reports published every year in *American Birds* echo these perceptions in many areas of the country (Temple and Wiens 1989).

To determine if there have been any significant changes in the numbers of wintering nine-primaried oscines (families Emberizidae and Passeridae, AOU Checklist 1983) over the last 46 years, we analyzed the counts from 19 North Carolina Piedmont Christmas Count circles and also analyzed human population growth for the county in which the circle is located. We have listed the count circles and their respective counties in Table 1. The locations of these circles are shown on Figure 1. The areas sampled appear to fall into two distinct categories based on human population density: urban counties with populations greater than 185 people per square kilometer and rural counties with populations of fewer than 110 people per square kilometer. We attempted to discover whether patterns of bird populations varied the same way at different densities of human population.

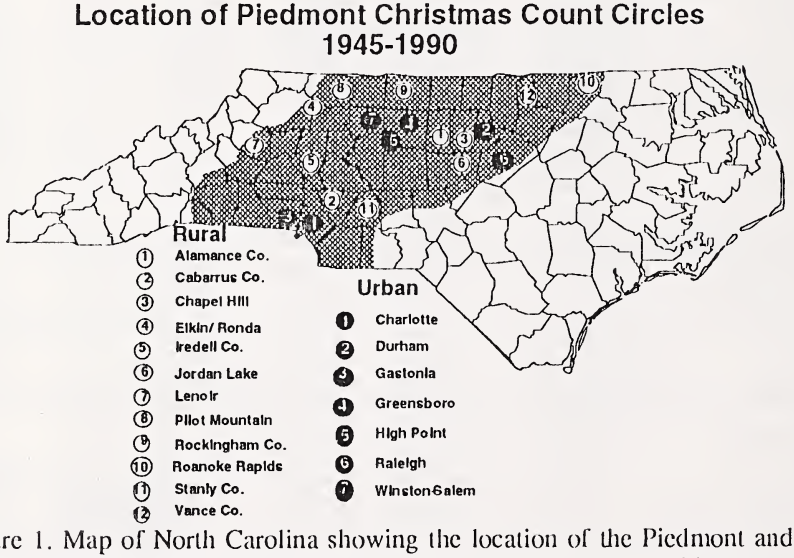


Figure 1. Map of North Carolina showing the location of the Piedmont and the twelve rural and seven urban Christmas Count circles from the Piedmont that provided data for the period 1945–1990.

We chose to use Christmas Counts because they represented a body of information on bird populations over a long period of time. When bird studies are

confined to just a few years, it is not possible to obtain a long-term profile of population dynamics (Wiens 1977, Temple and Wiens 1989). Studying only the wintering birds eliminated many spring and fall migrants which enabled us to focus on species that are most likely to be affected by local conditions.

Table 2: Species Examined

| Common Name | Scientific Name | Urban Trend | Rural Trend | Residence Status |
|---|---|---|---|---|
| Yellow-rumped Warbler | *Dendroica coronata* | increased | no trend | Winter |
| Pine Warbler | *Dendroica pinus* | down, then up | no trend | Permanent |
| Northern Cardinal | *Cardinalis cardinalis* | up, then down | up, then down | Permanent |
| Rufous-sided Towhee | *Pipilo erythrophthalmus* | up, then down | up, then down | Permanent |
| Field Sparrow | *Spizella pusilla* | decreased | no trend | Permanent |
| Savannah Sparrow | *Passerculus sandwichensis* | no trend | no trend | Winter |
| Song Sparrow | *Melospiza melodia* | up, then down | up, then down | Permanent |
| White-throated Sparrow | *Zonotrichia albicollis* | up, then down | up, then down | Winter |
| Dark-eyed Junco | *Junco hyemalis* | decreased | no trend | Winter |
| Red-winged Blackbird | *Agelaius phoeniceus* | increased | no trend | Permanent |
| Eastern Meadowlark | *Sturnella magna* | up, then down | decreased | Permanent |
| Common Grackle | *Quiscalus quiscula* | increased | no trend | Permanent |
| Brown-headed Cowbird | *Molothrus ater* | increased | no trend | Permanent |
| Purple Finch | *Carpodacus purpureus* | up, then down | up, then down | Winter |
| House Finch | *Carpodacus mexicanus* | increased | increased | Permanent |
| American Goldfinch | *Carduelis tristis* | no trend | no trend | Permanent |
| House Sparrow | *Passer domesticus* | up, then down | up, then down | Permanent |

The 17 species whose populations we examined are listed in Table 2. We chose these species because of their taxonomic similarity and the high consis-

tency with which they are observed on counts in the region. All but five are permanent residents of the North Carolina Piedmont, although the numbers of wintering individuals for many of these species are surely reinforced by migrants that breed farther north. The five species that are purely winter visitors in the study region are Yellow-rumped Warbler, Savannah Sparrow, White-throated Sparrow, Dark-eyed Junco and Purple Finch.

The 19 Piedmont cities tend to have similar habitats. Many of them have established bird clubs that contribute regularly to the Christmas Counts. Pooling the individual count circles together into composites by human density allowed us to look for broadly based rather than local trends. This technique increased the sample size and improved the ability to differentiate statistically significant trends from localized variations or "noise" (Wilcove and Terborgh 1984).

## MATERIALS AND METHODS

Using the annual Audubon Christmas Bird Counts, we evaluated bird populations from all available Piedmont North Carolina circles . We obtained the data for each year from 1945 to 1990 from the appropriate issues of *The Chat* and *American Birds* (formerly *Audubon Field Notes*). Earlier counts were not examined because we suspected the observations were not comparable, in part owing to the influences of World War II.

From the published count material we recorded the number of each species seen, the number of observers in the field, the number of parties in the field and the number of party hours spent in the field. Because there were wide fluctuations in the number of observers and the amount of time spent in the field, we normalized numbers of birds counted so that they could be compared realistically. We used the number of birds per 100 party hours as our normalization format. We then used the normalized numbers to determine running 5-year averages, variances and standard errors of the mean.

Because year-to-year fluctuations are of less importance than long-term trends, we used running five-year averages, a technique used effectively by Brown (1973). Much of the annual variation probably results from the margin of error in the count technique (Bock and Smith, 1971). Use of running averages provides graphs with smoother lines that are easier to read. Averaging also spreads out the effect of a year with unusual weather. In the Piedmont of North Carolina, the weather on the count day can vary from exceedingly cold to almost spring-like. Weather affects the total number of birds counted, especially among the small passerines, in part because it affects the diligence of the counters.

We used DeltaGraph Professional (v.2.0, DeltaPoint, Inc., 2 Harris Court, Suite B-1, Monterey, CA 93940) to graph the data for each species in each circle. Using this program, it was possible to run linear regressions as well as second- and third-order curvilinear regressions of mean bird numbers against year. Examination of these regressions indicated which species were showing significant changes in population, but frequently masked recent changes that appear to be important. Therefore, we present only the graphs of running means plus or minus two standard errors of the mean.

For each of the circles studied, we examined the description of the count territory in the annual Christmas Count report to determine if it had changed

significantly over the years. The center of the Charlotte circle had shifted 4.5 miles to the west, the center of the Raleigh circle had moved 1.7 miles SW and the center of the Durham circle had moved approximately 5 miles NNE. In all cases this placed more of the unincorporated area of the county in the count circle than had been true previously. We do not believe these shifts render the before-and-after comparisons unreliable. If anything, the changes in sampling areas are an attempt to maximize the number of species and individuals that can be counted. The locations of the other sampling territories appear to have remained unchanged. However, closing the dam to fill Jordan Lake in 1981 (after four count years) placed much of the lowland habitat within the count circle under water and caused loss of much songbird habitat.

Because participation in the Christmas Counts has not been continuous for all 46 years in many of the areas, particularly in the less densely populated areas, we have combined the observations into composite graphs. The composites were generated by summing raw counts for each circle for each year and dividing by the sum of party hours for each year. Five-year running means, variances, and standard errors were then calculated in the standard ways.

We determined significance of changes in means by visual inspection of the graphs. If the error bars (two standard errors = 95% confidence limits) did not overlap, we considered the means to have changed in a way that is statistically significant.

Human population changes were obtained from the decennial censuses conducted by the U.S. Department of Commerce for 1940 through 1990.

## RESULTS

Figures 2 through 7 show the results of graphing the Christmas Count data as running five-year averages, for 17 common species of nine-primaried oscines found in the Piedmont of North Carolina. We have presented the data as composites of urban and rural count circles based on density of human populations in the county of the count circle. Five-year running means of the number of birds per 100 party hours are plotted at the median year. Error bars, representing two standard errors of the mean, are included to facilitate determination of significance. In Figure 6, because of the huge variability in annual numbers of blackbirds recorded, we have plotted the data as logarithms; all other plots are as integers.

Figure 2 shows three resident species with similar patterns of population trends. The Northern Cardinal (*Cardinalis cardinalis*), Rufous-sided Towhee (*Pipilo erythrophthalmus*), and House Sparrow (*Passer domesticus*) all underwent significant increases between the 1940s and the mid-1970s followed by equally significant declines to the present. In each case there appears to have been no significant change from the beginning to the end of our sampling period. These trends are the same in both the urban and rural counties.

Figure 3 portrays the population trends of three closely related species: Song Sparrow (*Melospiza melodia*), White-throated Sparrow (*Zonotrichia albicollis*), and Dark-eyed Junco (*Junco hyemalis*). Only the Song Sparrow is a permanent resident, although its winter numbers are enhanced by northern migrants. It is apparent that Song and White-throated sparrows both underwent significant overall increases in the urban counties from the early 1960s to the late 1970s. Notice, however, that both of these species have declined signifi-

cantly in the urban counties since the late 70s. White-throated Sparrow populations appear to exhibit a similar pattern of change in the rural counties. Song Sparrows increased significantly in the rural counties during the 1970s but appear to be declining at present. Although the Dark-eyed Junco has declined significantly in the urban counties since the mid-1970s, it has maintained steady numbers in the rural counties.

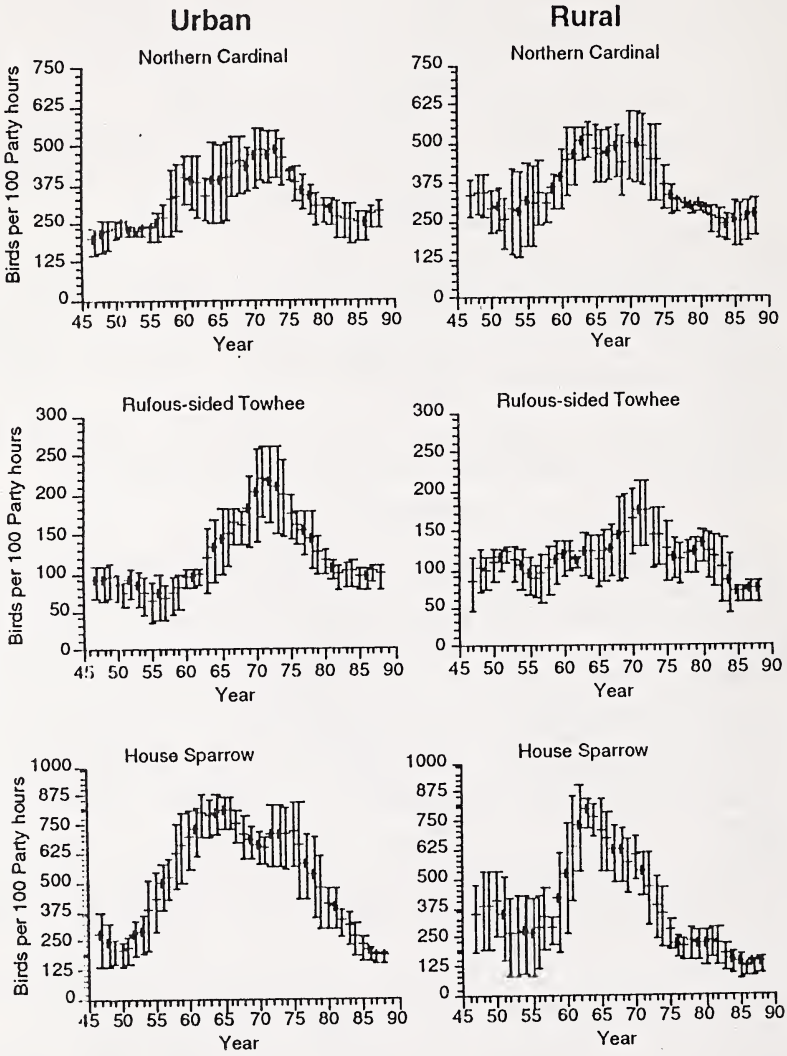


Figure 2. Graphs of five-year running means of birds per 100 party hours for the period 1945–1990 comparing Northern Cardinal, Rufous-sided Towhee and House Sparrow in rural and urban settings. Error bars extend ± two standard errors of the mean (95% confidence limits).

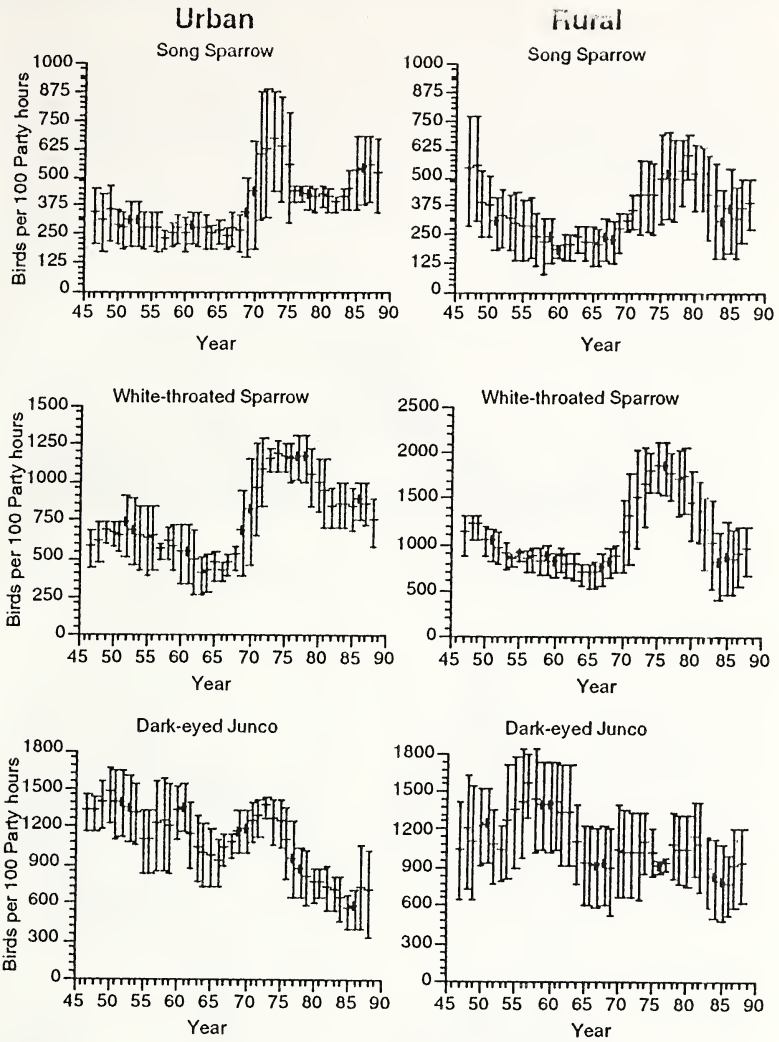


Figure 3. Graphs of five-year running means of birds per 100 party hours for the period 1945–1990 comparing Song Sparrow, White-throated Sparrow and Dark-eyed Junco in rural and urban settings. Error bars extend ± two standard errors of the mean (95% confidence limits).

Figure 4 depicts the populations of the common cardueline finches in the North Carolina Piedmont. American Goldfinch (*Carduelis tristis*) does not appear to have undergone any significant overall changes in either the urban or the rural counties, although there appears to have been an increase during the last decade in the rural counties. The House Finch (*Carpodacus mexicanus*) first appeared in the Piedmont in November 1962 and has shown classic exponential population growth ever since. Although the species is clearly more abundant in the urban counties, the pattern of growth is the same in both areas.

Purple Finch (*Carpodacus purpureus*) shows a pattern of increasing populations from the middle of the 1940s until the early 1970s, after which it underwent a significant decline.

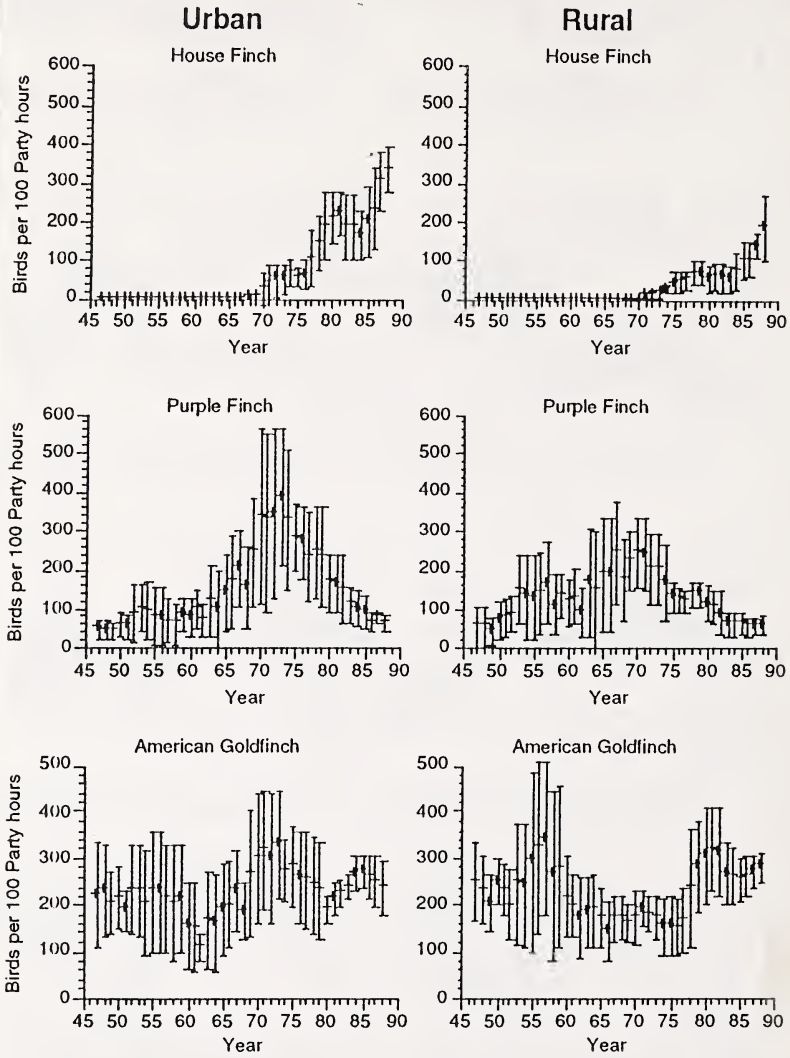


Figure 4. Graphs of five-year running means of birds per 100 party hours for the period 1945–1990 comparing House Finch, Purple Finch and American Goldfinch in rural and urban settings. Error bars extend ± two standard errors of the mean (95% confidence limits).

Figure 5 illustrates the patterns of change shown by three species of grassland birds. The Field Sparrow (*Spizella pusilla*) has declined slowly but significantly in the urban counties while not changing significantly in the rural counties. The Savannah Sparrow (*Passerculus sandwichensis*) has not changed sig-

nificantly during the full time period of our study, largely as a result of highly variable year-to-year counts in the 40s, 50s and 70s. However, both urban and rural populations appear to have undergone significant declines in the last 10 to 15 years. Similarly, the Eastern Meadowlark (*Sturnella magna*) cannot be shown to have undergone a significant long-term change between the mid-40s and the present, but there is a significant increase in the population size in the urban counties until the early 1970s followed by a significant decline in numbers in both urban and rural counties.

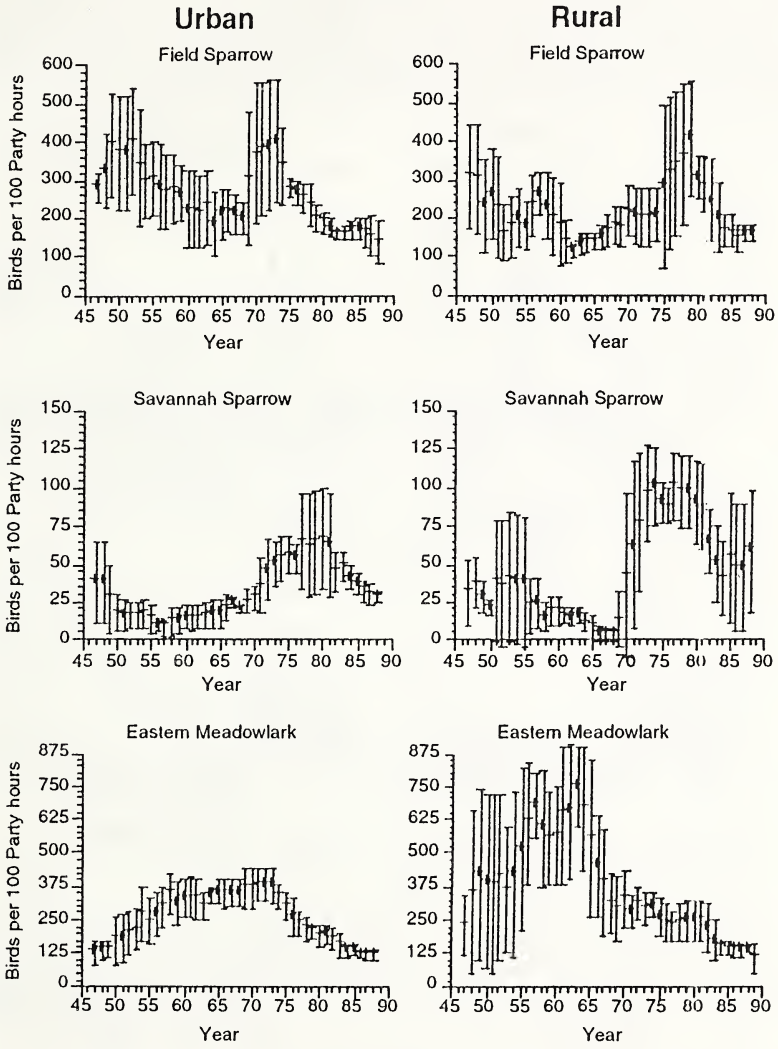


Figure 5. Graphs of five-year running means of birds per 100 party hours for the period 1945–1990 comparing Field Sparrow, Savannah Sparrow and Eastern Meadowlark in rural and urban settings. Error bars extend ± two standard errors of the mean (95% confidence limits).

The numbers of flocking blackbird species are shown in Figure 6. These numbers are likely to vary greatly from year to year, depending on whether or not the site of a roost has been found. Because the counts may vary by three or four orders of magnitude from one year to another we have plotted these numbers on a logarithmic scale. When the magnitude of the two standard errors exceeded the value of the mean, the computer graphing program could not plot the error bars. Given those precautions, we are surprised that it is possible to draw conclusions about the populations of flocking blackbirds. All three species

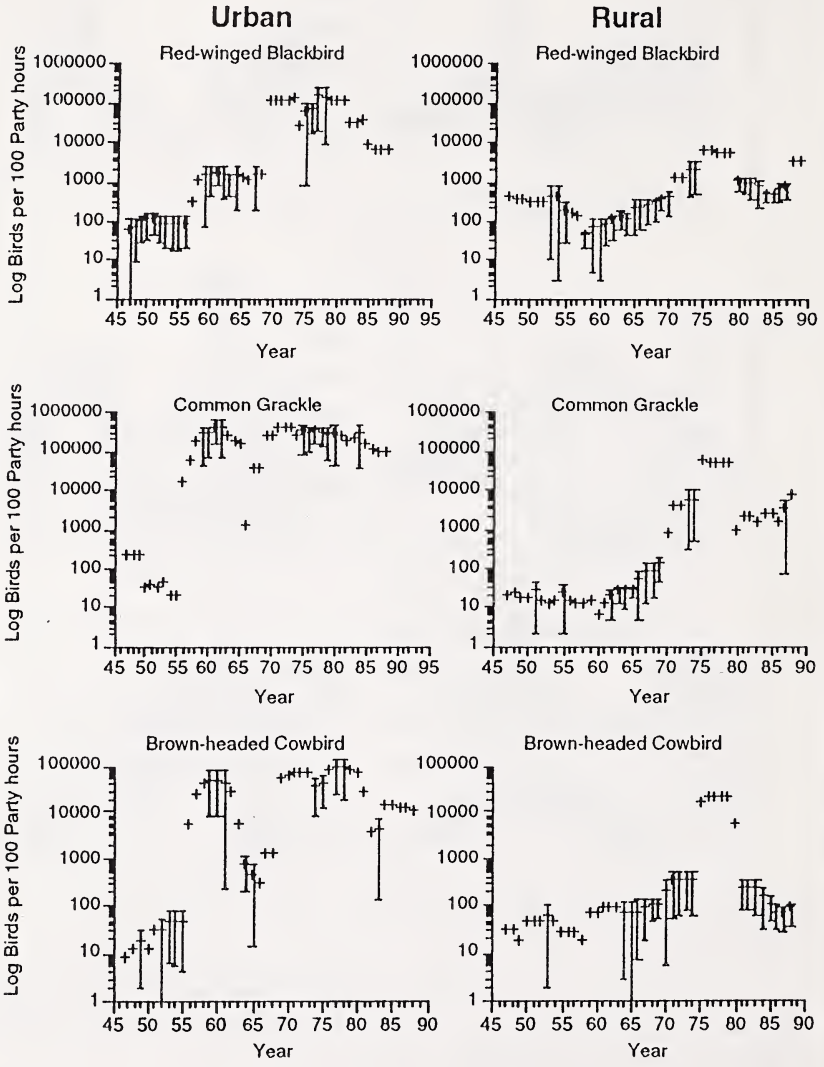


Figure 6. Graphs of five-year running means of birds per 100 party hours for the period 1945–1990 comparing Red-winged Blackbird, Common Grackle and Brown-headed Cowbird in rural and urban settings. Error bars extend ± two standard errors of the mean (95% confidence limits).

studied (Red-winged Blackbird, *Agelaius phoeniceus*; Common Grackle, *Quiscalus quiscula*; and Brown-headed Cowbird, *Molothrus ater*) appear to have increased dramatically, at least in the urban counties of the Piedmont. Their numbers in the rural counties appear to have remained relatively stable.

We present the two species of warblers that overwinter in reasonable numbers in Figure 7. Pine Warblers (*Dendroica pinus*) underwent a significant decline in the 1950s in the urban counties. Since the early 1960s they have increased to almost the population size that they had in the 1940s. It is difficult to perceive any overall trend in the population of Pine Warblers in the rural counties because of the highly variable counts during the mid-1950s. However, it does appear that rural Pine Warblers have increased significantly during the 1980s. In contrast, the Yellow-rumped Warbler (*D. coronata*) has increased significantly in the urban counties since the 1960s while remaining reasonably constant in the rural counties.

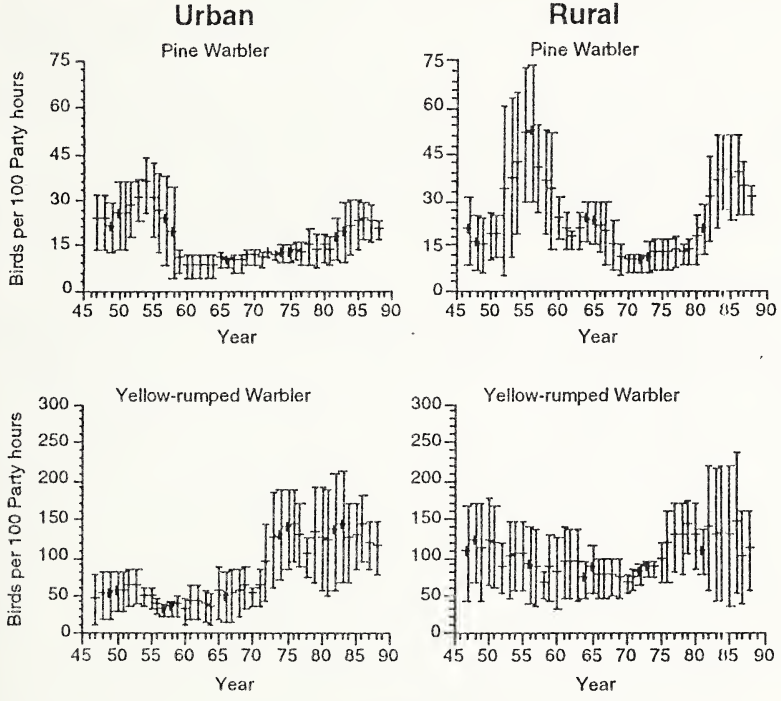


Figure 7. Graphs of five-year running means of birds per 100 party hours for the period 1945–1990 comparing Pine Warbler and Yellow-rumped Warbler in rural and urban settings. Error bars extend ± two standard errors of the mean (95% confidence limits).

## DISCUSSION

Of the 17 species examined in our study, the urban populations of five have clearly increased, one has recovered from an earlier decline, two have decreased over the whole period, seven have decreased after earlier increases,

and two have remained unchanged. In the rural counties, nine species show no trends, one has increased, one has decreased over the whole period and six show declines after earlier increases. The first, and probably most important, question is: Are these conclusions based on valid data?

The scientific value of the Christmas Bird Count has been long debated (Arbib 1967, Tramer 1974, Raynor 1975, Root 1988). We chose the count as the basis for this study because there is no other collection of data of its longevity and geographical extent dealing with birds (Arbib 1967). It is collected in the same manner, in the same areas and at approximately the same time every year. Although the participants are volunteers, rather than professional observers, the count organizers try to encourage as much accuracy as possible. Unusual sightings are closely scrutinized and must be supported by details (Tramer 1974). In this study we have concentrated on common species, those expected to be found on the count regularly and ones with which observers are normally well acquainted. If a bias is associated with counting these species, it is likely to be an underrepresentation because some observers were concentrating on more noteworthy species (Tramer 1974).

The identification of *Carpodacus* species presents a special challenge with a serious potential for generating misleading conclusions in this kind of study. We believe that the first House Finches to colonize North Carolina were probably misidentified as Purple Finches or Common Redpolls. However, the updating of most field guides and the publication since the late 1960s of numerous articles clarifying the points of distinction between the two species has reduced the likelihood of misidentification. At this point we are willing to assume that the factors involved with incorrectly identifying one species as the other are evenly balanced.

The selection of party hours as the normalizing factor is supported by work done previously. This technique was used by Bystrak (1971) and Bock and Smith (1971). Raynor (1975) ran linear correlations between the numbers of 20 species and six measures of effort (e.g. party hours, number of observers, and party miles). He found the highest correlation between the number of observers followed by the number of parties and after that party miles. However, for the same 20- year period of time Raynor used, Chandler Robbins (pers. comm. in Raynor 1975) found the highest correlation with party hours. Dehaven (1973) used both party hours and party miles and found little difference in the results.

What we find much more worrisome is the certainty that the techniques used to conduct the counts have gradually changed over the period covered by this study. A quick check of count data from any circle will reveal an increase of at least ten times the number of miles driven to conduct the count from the mid-1940s to the present while the number of miles on foot had increased by a much smaller factor and sometimes even decreased. This implies that the observers have used a qualitatively different method of population estimation based on increased mobility within the circle. More ground can be covered and more birds can be counted per unit of time. Efficient observers will devote more of their attention to those areas within the circle that have the highest probability of producing more "interesting" birds. The increased mobility also makes it possible to double back to find the birds that were missed earlier at one of the priority stops. That ought to result in more species per count circle and more individuals per party hour for each species.

If increased mobility had an effect on the number of individuals per party hour, we would expect it to manifest itself most clearly during the period from 1945 to 1960, when miles by car increased most dramatically. The only species whose increase in numbers per 100 party hours appear to correlate with increased automobile usage are Northern Cardinal, House Sparrow and the blackbirds in the urban counties, and Eastern Meadowlark in both urban and rural counties. We believe that the change in methodology is not an adequate explanation for apparent increases, given the apparent decline in several other species during the same time period. We are left with the conclusion that populations of several species have changed significantly during the last 46 years.

The increase by the House Finch is clear and probably needs no further explanation. Its history on the East Coast and in the Carolinas has been described repeatedly (Aldrich and Weske 1978, Belthoff and Gauthreaux 1990, Elliot and Arbib 1953, Potter et al 1980, and Stewart 1989). Clearly, this is a species whose requirements are being met by the habitats of most of the eastern United States.

The blackbirds and the Yellow-rumped Warbler, however, appear to be increasing preferentially in the urban counties of our study. The apparent increase in the blackbirds (Red-winged Blackbird, Brown-headed Cowbird and Common Grackle) may be a function of their winter flocking behavior and the higher probability of discovering one of the massive congregations in areas where there are large numbers of people. Thus it is more likely that a flock will be discovered in an urban area.

We have no insights about why Yellow-rumped Warblers should be increasing in urban areas while remaining fairly stable in the rural counties. It is worth noting that the numbers of Yellow-rumped Warblers found in the Piedmont counties, both urban and rural, are miniscule in comparison with their abundance on the Coastal Plain.

The population declines shown by cardinals, towhees, and meadowlarks all appear to follow the same pattern of initial increase followed by a decrease over at least 20 years. We suspect that the increase in numbers of Brown-headed Cowbirds, which are now breeding birds in the North Carolina Piedmont, may be partly responsible for declines in host species (Potter and Whitehurst 1981). The effectiveness of cowbirds as brood parasites on cardinals and towhees is particularly impressive (Friedman 1929, Friedman 1966, Friedman 1971, Ehrlich et al. 1988). Cowbirds may also be partly responsible for the apparent decline in Field Sparrows. In addition, it is apparent that the appropriate habitats have declined significantly for breeding meadowlarks and Field Sparrows during the same period of time. It is not so apparent that the breeding habitat has decreased for cardinals and towhees.

Cardinals and towhees are associated with brushy edge habitats and have usually done well around homes and yards. Our initial prediction was that as the human population grew and built more single-family suburban homes that more backyard habitats suitable for cardinals and towhees would be provided and that their populations would increase. That such is not the case may be a function of the change in home construction patterns. Rather than building single-family homes one at a time, the trend is now to "develop neighborhoods" by removing all native vegetation on plots of up to several hundred acres, building homes and service roads and then landscaping the individual proper-

ties with grass and a minimal number of trees and bushes (usually non-native cultivars). This usually removes the normal habitat for birds such as cardinals and towhees for a period of several years and replaces it with something that is not necessarily equivalent. The amount of time that passes before acceptable habitat is re-established may preclude the ability of small numbers of birds in small islands or "pockets" of suitable native habitat to recover. This long-term removal of prime "edge" habitat with gradual re-establishment of suboptimal suburban habitat may also account (at least in part) for the differential decline of juncos in the urban counties of our study.

Several reviewers have suggested that the population declines in urban counties may be strongly influenced by increased predation by domestic cats and dogs. While we agree that domestic cats and dogs do function as effective predators, we are convinced that they merely replace natural predators (such as hawks, owls, shrikes, snakes, weasels, foxes, etc.) that are reduced or eliminated in urban areas. Similarly, there are no data suggesting that the number of accidental deaths from collisions with vehicles or windows is necessarily greater in urban areas than in rural areas.

There is a strong correlation between bird densities and the type of vegetation available to them for food, shelter and nesting (Welty 1982, Mills et al. 1989). Mills et al. (1989) reported that the vegetation was more important than the housing density in urban areas. Developing an area not only eliminated local vegetation, but also often replaced native vegetation with exotic cultivars. Native birds are usually adapted to make use of native plants and they lack this relationship with introduced plant species. In addition, Mills et al. found a positive correlation between introduced plant species and introduced, non-native birds. This same relationship between native birds and native plants, and the effect of introduced exotic plant species on native birds has been reported in other studies (Gavareski 1976, Bessinger and Osborne 1982, Tweit and Tweit 1986, Rosenberg et al. 1987). Because the introduction of exotic plant species correlates closely with human population density, it is difficult to determine which is the more important factor influencing bird populations.

It is apparent that some aspect(s) of human population growth is having a significant influence on some wintering nine-primaried oscine populations (see Table 2). While 10 of the 17 species examined in this study show no trend in population change in the rural (low human density) counties, only two are stable in the urban (high human density) counties. While five species show declines to the present in rural counties, nine do so in the urban counties. Five species show clear patterns of increase in the urban counties while only two do so in the rural counties.

There is no obvious distinction between the population trends of species that are permanent residents and those that are strictly winter visitors. We have demonstrated that both migrants and residents have undergone significant changes in numbers. This could suggest that the causal factors for population changes may be broader than those at work only within the North Carolina Piedmont. It could also suggest that changes in available winter habitat have an effect on the sizes of populations regardless of where the birds breed.

While we are not able at this time to determine which hypothesis is a better explanation for why nine-primaried oscine populations are changing, we can demonstrate that: 1) populations are more likely to change in areas where there

are many people than in areas where there are fewer people; 2) the populations that are declining outnumber those that are increasing; and 3) a majority of species that are increasing are those many people regard as "pests" (i.e., House Finch and blackbirds).

Acknowledgments: We extend our deepest thanks to Ralph Morrison, Frank Gilliam, Lynn Moseley, Chandler Robbins, David Lee, Harry E. LeGrand, Jr., and Eloise Potter who read earlier drafts of this manuscript. We have also been aided considerably by discussions with Donald Allen, Dennis Burnette, and Susan Roney Drennan. In particular we thank the innumerable volunteer counters and compilers who provided the data for the Audubon Christmas Counts.

## LITERATURE CITED

Aldrich, J.W. and J. S. Weske. 1978. Origin and evolution of the eastern House Finch populations. Auk 95:528:536.

Arbib, Robert S. 1967. Considering the Christmas Count. Aubudon Field Notes 21:39-42.

Askins, R.A. and M.J. Philbrick. 1987. Effect of changes in regional forest abundance on the decline and recovery of a forest bird community. Wilson Bull. 99:7-21.

Belthoff, J. R. and S. A. Gauthreaux, Jr. 1990. Breeding ranges of *Carpodacus* finches wintering in South Carolina. Chat 54:61-62.

Bent, A.C. 1953. Life histories of North American wood warblers. U. S. Nat. Mus. Bull. 203.

Bent, A.C. 1968. Life history of North American cardinals, grosbeaks, buntings, towhees, finches, sparrows and their allies. U. S. Nat. Mus. Bull. 237.

Bessinger, S.R. and D.R. Osborne. 1982. Effects of urbanization on avian community organization. Condor 84:75-83.

Bock, C.E. and R.B. Smith. 1971. An analysis of Colorado Christmas counts. American Birds 25:945-947.

Brown, W.H. 1973. Winter population trends in the Marsh, Cooper's and Sharp-shinned Hawk. American Birds 27:6-7.

Bystak, D. 1971. How to prepare a winter range map from Christmas Count Data. American Birds 25:952-956.

Conner, Jack. 1988. Empty skys: where have all the songbirds gone? Harrowsmith 16:34-45.

Davis, John. 1973. Habitat preferences and competition in wintering Juncos and Golden-crowned Sparrows. Ecology 54:174-80.

Dawley, Charlotte. 1954. The Birds of Guilford County. The Chat 18:30-40.

Dehaven, Richard W. 1973. Winter population trends in the Starling in California. American Birds 27:836-838.

Dow, D. 1970. Distribution and dispersal of the Cardinal, *Richmondena cardinalis*, in relation to the vegetational cover and river system. American Naturalist. 84:190-207.

Ehrlich, Paul R., David S. Dobkin and Darryl Wheye. 1988. The Birder's Handbook: A Field Guide to the Natural History of North American Birds. Simon & Schuster, Jr., New York. 785 pp.

Elliot. J. J. and R. S. Arbib, Jr. 1953. Origin and status of the House Finch in the eastern United States. Auk 70:31-37.

Friedman, H. 1929. The Cowbirds: A Study in the Biology of Social Parasitism. Charles C. Thomas, Pub., Springfield, IL. 421 pp.

Friedman, H. 1966. Additional data on the host relations of the parasitic Cowbirds. Smithsonian Misc. Coll., 149, no. 11

Friedman, H. 1971. Further information on the host relations of the parasitic Cowbirds. Auk 88:239-255.

Gavareski, C.A. 1976. Relation of park size and vegetation to urban bird populations in Seattle, Washington. Condor 78:375-382.

Guilford County Planning Dept. 1986. Comprehensive plan for Guilford County. Greensboro, N.C.

Holmes, Richard T. and Thomas W. Sherry. 1988. Assessing population trends of New Hampshire forest birds: local vs. regional patterns. Auk 105:756-768.

Mills, G. Scott, John B. Dunning Jr., and John M. Bates. 1989. Effects of urbanization on breeding bird community structure in southwestern desert habitats. Condor 91:416-428.

North Carolina Dept. of Administration. 1986. Profile of North Carolina counties. Raleigh.

Odum, Eugene P. 1983. Basic Ecology. Third edition. CBS College Publishing, Philadelphia.

Potter, Eloise F., J.F. Parnell, and R.P. Teulings. 1980. Birds of the Carolinas. University of North Carolina Press, Chapel Hill.

Potter, Eloise F., and G. Whitehurst. 1981. Cowbirds in the Carolinas. Chat 45:57-68.

Preston, Frank W. 1958. Analysis of the Audubon Christmas Counts in terms of the lognormal curve. Ecology 34:620-624.

Raynor, Gilbert S. 1975. Techniques for evaluating and analyzing the Christmas Bird Count data. American Birds 29:626-33.

Robbins, C.S., D. Bystrak, and P.H. Geissler. 1986. The breeding bird survey: its first fifteen years, 1965-1979. Washington, D.C. U.S. Dept. Inter., Fish and Wildl. Serv.

Root, Terry. 1988. Atlas of wintering birds. University of Chicago Press, Chicago.

Rosenberg, K.V., S.B. Terrill, and G.H. Rosenberg. 1987. Value of suburban habitats to desert riparian birds. Wilson Bull. 99:642-654.

Sprenkle, J.M. and C.R. Blem. 1984. Metabolism and food selection of the eastern House Finch. Wilson Bull. 96:184-195.

Stewart, P. A. 1989. Nesting localities of House Finches wintering in North Carolina. Chat 53:90.

Temple, Stanley A., and John Wiens. 1989. Bird populations and enviromental changes: can birds be bio-indicators? American Birds 43:260-270.

Terborgh, John W. 1980. The conservation status of neotropical migrants: present and future, p.21-30. *in* Migrant birds of the neotropics: ecology, behavior, distribution and conservation. Allen Keast and Eugene S, Morton, eds. Smithsonian Institution Press, Washington, D.C.

Terres, John K. 1980. The Audubon Society encyclopedia of North American Birds. Alfred A. Knopf, New York.

Tramer, Elliot J. 1974. An analysis of the species density of landbirds during the winter using the 1971 Christmas Bird Count. American Birds 58:563-67.

Tweit, R.C. and J.C. Tweit. 1986. Urban development effects on the abundance of some common resident birds of the Tuscon area of Arizona. American Birds 40:431-436.
Wiens, John A. 1977. On competition and variable environments. American Scientist 65:590-597.
Welty, Joel C. 1982. The Life of Birds. Third edition. CBS College Publishing. Philadelphia.
Wilcove, D.S. and J.W. Terborgh. 1984. Patterns of population decline in birds. American Birds 38:10-13.
Zapf, T. 1945. Song Sparrow nest at Greensboro. Chat 9:45-46.

## Report of the North Carolina Bird Records Committee 1993

This report enumerates the decisions of the Carolina Bird Club's North Carolina Bird Records Committee during 1993.

Accepted as Valid. The reported identification is judged to be accurate and the bird is judged to be of wild origin. Photographs for all accepted species have been deposited at the N. C. Museum of Natural Sciences.

**Herald Petrel** (*Pterodroma arminjoniana*). A light-phase individual was photographed by Brian Patteson on 8 August 1992 off the Outer Banks. The species is already on the state's Official List; this appears to be the first photographic documentation for a light-phase bird in the state.

**Bulwer's Petrel** (*Bulweria bulwerii*). One was seen by Todd Hass on 1 July 1992 in the Gulf Stream off the Outer Banks. The record was considered Unresolved on a first ballot, because of two Inadequately Documented votes. However, after outside review was obtained, a second ballot yielded an Accepted Sighting verdict, with only one Inadequately Documented vote. This is the first accepted sighting for North Carolina, and the species is placed on the Provisional List.

**White-tailed Kite** (*Elanus leucurus*). An adult was observed by Norma and Bill Siebenheller at the Shining Rock Wilderness Area in Haywood County on 23 July 1993. This is the third accepted record of the species, known formerly as the Black-shouldered Kite (*E. caeruleus*), for the state; the two previously accepted records are from the extreme southeastern corner of the state. The kite is already on the Official List, based on a photograph of an individual from the Fort Fisher area.

**Gyrfalcon** (*Falco rusticolus*). A gray-phase individual, believed to have been a female, was seen in Pamlico County on 10 February 1992 by Wade Fuller and Robert Holmes. The Committee gave a unanimous vote to accept the sighting; there were also no Questionable Origin votes. This is the first accepted record of the Gyrfalcon in North Carolina, and the vote places the species on the Provisional List, as no photographs were taken.

**Bar-tailed Godwit** (*Limosa lapponica*). Steve Dinsmore observed up to two birds at Portsmouth Island from 24 April to 9 May 1993. The species is

already on the Official List; the 1993 report is the second accepted spring report for the state.

**Mew Gull** (*Larus canus*). An adult was observed and photographed on 19 February 1993 at Cape Hatteras point by Steve Dinsmore, Jeremy Nance, and John Fussell. As this is the third accepted record of the species for the state, the Mew Gull is moved from the Provisional List to the Official List. The photographs taken by Dinsmore also add definitive documentation of the species in North Carolina.

**California Gull** (*Larus californicus*). An adult was seen by John Fussell, Steve Dinsmore, and Jeremy Nance on 29 January 1993 at the Newport landfill in Carteret County. It was seen on the following day by three other observers. Dinsmore provided a written description and color photographs. This is the first accepted report of the species for North Carolina, and the photographs place the species on the Official List.

**Thayer's Gull** (*Larus thayeri*). A first-winter bird was observed by Ned Brinkley and Brian Patteson on 27 December 1991 at Cape Hatteras point. There are a handful of previous state records, and the Thayers Gull is already on the Official List. An adult was seen by many observers at Cape Hatteras point on 30 December 1992. The Committee accepted details written by John Wright.

**Black Guillemot** (*Cepphus grylle*). An individual changing from winter plumage to breeding plumage was observed by numerous observers at the jetty at Wrightsville Beach in late April and early May 1993. Sam Cooper provided a written description; however, no recognizable photographs were obtained. This is the first sighting of Black Guillemot for North Carolina, and acceptance of the details places the species on the Provisional List.

**White-winged Dove** (*Zenaida asiatica*). Two birds were present at a feeder in Frisco, Dare County, during the latter half of November 1992. The doves were observed by several dozen birders. There are a handful of previous state records, and the species is already on the Official List.

**Bank Swallow** (*Riparia riparia*). One was seen by John Fussell, Larry Crawford, and Bob Holmes at a quarry at New Bern on 17 December 1991, and it was seen again on 21 December by Eric Dean. This is perhaps the first winter record for the state.

**Cave Swallow** (*Hirundo fulva*). One was seen by John Fussell on 17 December 1987 near the Mill Creek community in Carteret County. This record was accepted on a second ballot, as the Committee had an "Unresolved" vote in 1992. This is the second accepted sight record for North Carolina; the species remains on the Provisional List.

**Townsend's Warbler** (*Dendroica townsendi*). An adult male was observed and photographed by Roger McNeill at Pea Island on 7 November 1992. The Committee accepted both the written description and the photograph of the bird, thus placing Townsend's Warbler on the Official List. This is the first accepted record with documentation for the state; a previous sight report from the mountains had been accepted by an earlier records committee but was not accepted by the present Committee.

**Shiny Cowbird** (*Molothrus bonariensis*). A male was seen at a feeder at Cape Carteret in western Carteret County for several weeks in the fall of 1992. Dozens of people saw this bird, with the initial identification being made by

John Fussell. A second male was seen on a single day. The Committee voted on the written description of a male that was observed on 31 October by Harry LeGrand. The species is already on the Official List, and this becomes the fourth accepted record for North Carolina.

Unaccepted Sighting. The bird is judged to be a species other than that reported, or the bird is insufficiently documented for identification to the species reported.

**Arctic/Pacific Loon** (*Gavia arctica/pacifica*). A single observer reported an individual of this species complex from the southern coast in December 1992. The majority of the Committee voted that the record was inadequately documented, such that Common Loon (*Gavia immer*) and Red-throated Loon (*G. stellata*) were not completely eliminated.

**Pacific Loon**. One was reported from the southern coast in April 1993. The Committee reviewed scant details of this bird provided by one of the observers and considered the material to inadequately document the sighting. However, no correspondence has yet been received from the original observer, who made the initial identification. If such documentation is received from the original observer, the Committee will re-evaluate the report; however, at the present time, the report is considered to be an Unaccepted Sighting. There is only one accepted record of Pacific Loon for the state, but the species is on the Official List based on a published description and photograph of an individual at Cape Hatteras point in May 1987.

**Swainson's Hawk** (*Buteo swainsoni*). An adult reported from the mountains in fall 1992 was not accepted. Several Committee members believed that the bird might have been a Broad-winged Hawk (*Buteo platypterus*). The species remains on the Provisional List, with two accepted sight records.

**Brown-crested Flycatcher** (*Myiarchus tyrannulus*). A "possible" Brown-crested Flycatcher was reported from the Sandhills region in January 1993. The vote was evenly split among accept and non-accept votes, giving an Unaccepted Sighting outcome. However, the Committee might re-evaluate this record, if additional material is received from the observer.

Unresolved. Further consideration by the Committee is needed.

**Cape Verde Petrel** (*Pterodroma feae*). One seen and photographed in May 1992 in the Gulf Stream off the Outer Banks by many observers received more than 50% Accepted Sighting votes but more than 25% Non-accepted votes. The Committee voted on the specific Cape Verde Petrel taxon, not on the "Soft-plumaged" Petrel complex, which is already on the Provisional List for North Carolina. Because a number of scientists consider the complex to consist of three species, the Committee's vote was strictly that for *P. feae*, which is the identification made by the persons making the report. As a result of the voting tally, the report will go to outside review for further consideration. Because of the presence of photographs, the Committee also will make a first vote on acceptance of the "Soft-plumaged" Petrel complex to the Official List, in addition to a second vote on acceptance of Cape Verde Petrel to the Official List.

**Thayer's Gull.** An immature reported from the coast in December 1992 received more than 50% Accepted Sighting votes but more than 25% Non-accepted votes.

**Tropical/Couch's Kingbird** (*Tyrannus melancholicus/couchii*). One was reported from the Outer Banks in late fall 1992. The species complex received more than 50% Accepted Sighting votes but more than 25% Non-accepted votes. There were no Accepted Sighting votes for either Tropical Kingbird or for Couch's Kingbird specifically. Thus, the vote for the species complex only is to go to outside review. The species complex is already on the Official List, based on a bird photographed near Fairfield in December 1985 and January 1986; the bird was identified as a Tropical Kingbird based on call notes heard, but a tape recording of the calls was not obtained for documentation to Tropical Kingbird.

Persons interested in obtaining a copy of the "Regulations Governing the Operation of Bird Records Committees" should write to Harry LeGrand, the North Carolina Committee Chairman, 331 Yadkin Drive, Raleigh, NC 27609.

Committee members: Harry E. LeGrand, Jr., Chairman
Derb S. Carter, Jr.
Samuel Cooper
Richard J. Davis
John O. Fussell III
Simon R. B. Thompson
Michael H. Tove

## REPORT OF THE SOUTH CAROLINA BIRD RECORDS COMMITTEE 1993

During 1993 the South Carolina Birds Record Committee (SCBRC) continued to refine its procedures under the overall guidance of a draft of regulations to govern both Carolina record committees. This draft was reviewed and approved with changes at a meeting 31 July 1993, with a majority of the SCBRC present, and now awaits final CBC board approval. This approval was granting at the January '94 meeting at Litchfield, SC. By a separate vote, the changes incorporated by this draft regulation were immediately adopted by the SCBRC for all future actions; decisions rendered before 31 July will stand, since none would have been materially affected by the new regulations.

The adoption of these regulations resulted in a decrease in the number of accepted sight reports, without supporting specimen or photo, required to add a species to the SC Definitive List from 4 to 3, which brings SC into agreement with NC, and most other states. This change resulted in five (5) species being added to the Definitive List (Harlequin Duck, Long-tailed Jaeger, Say's Phoebe, Warbling Vireo, and Pine Grosbeak).

During 1993 we accepted the resignations of Chris Marsh and William Post from the SCBRC, their work in our first year is greatly appreciated, and their thoughtful insight may be sought in the future in tough cases. This

initiates the rotation of one or two members of the committee each year, to assure a continued fresh input, and avoid cases of burnout. They have been replaced by Pete Laurie and Roger Clark, both experienced birders: Roger in particular has lived and birded in many areas of the United States, which should reinforce our review of Northern and mid-western stragglers; Peter knows the coastal area as few others, has submitted a number of reports to the SCBRC, and will be a valuable member. Also in the past year, Robin Carter asked to be relieved of his duties as chairman, though he remains on the board. Robin was instrumental in getting us off to a good start, and many thanks are owed him for doing an excellent job. The writer accepted nomination from Lex Glover to fill the vacancy, as well as retaining the duties of secretary.

During the year we received and circulated 19 new reports, and have completed review of 17, plus 8 holdovers from 1992. These resulted in the addition of three (3) new species to the state Provisional I list (Pacific Loon, Actic Tern and Blue-throated Hummingbird), the addition of four (4) species to the Definitive List (Manx Shearwater, Snowy Plover, Black Guillemot, and Band-tailed Pigeon), and a change from Provisional to Definitive for Curlew Sandpiper. Details on completed action, by case record, follow below, with comments from committe members where appropriate.

We would also like to stress to respondents that submittal to, and acceptance by a state record committee of a sighting, however good the documentation, does not meet the criteria of a published record, available to others in the field for study and evaluation. For the record to become permanently documented, and available to others in the field, it must be published in an appropriate journal, such as *The Chat*. This can be either as a "General Field Note" (Dennis Forsythe is the SC editor for this section) or as a full article (submit directly to Herb Hendrickson, editor of *The Chat*); their addresses appear in *The Chat*. Mention in the *CBC Newsletter* does not meet the criteria of publication, and neither does inclusion in the *American Birds* regional reports.

As a whole, I feel the committee is working well. Late receipt of reports (some have been over two years old!) continues to be a problem, as well as slow action by the committee, at times. We wish to thank all respondents for their time and effort, and continue to urge submittal of unusual temporal or location sightings to the board. From time to time we may elect not to circulate such a report, and advise the submitter of its acceptance without further action, but we would rather be swamped by too many, than to miss one of significance.

Actions Completed in 1993

Note: The first two numbers of the case record indicate the month and year of the sighting, not of submittal to SCBRS. The third number is sequential for the month of sighting. A letter modifier indicates multiple reports of what is believed to be the same bird(s).

12-89-1 **Green-winged Teal**, Eurasian ssp. Rejected, insufficient details. (5-1). The submittal was photographs of a bird shot in 1989, near Charleston, The photographs did not show sufficiently well the white horizontal flank stripe above the wing, nor was there any trace of the buffy edges to facial

chestnut patches, typical of the Eurasian race. Best guess at this time is that this was an intergrade (hybrid if they were separate species).

4-91-1, **Manx Shearwater** - Mark Spinks & William Post. Accepted. This report records the accession to the Charleston Museum's collection of a Manx Shearwater found dead at Cape Island, Charleston County. While not in the form that the committee would normally accept, the existince of a valid specimen leads to acceptance, and addition of the species to the Definitive List.

8-91-1, **Band-tailed Pigeon** - Bill Pulliam. Accepted (7) Questionable Origin (1). Excellent report of a bird seen and photographed at Georgetown. The majority of reviewers concurred with the sumbitter that this was a truly wild bird. One observer felt there was an outside possibility of an escaped aviary bird. Added to the South Carolina Definitive List on the basis of the readily identifiable photographs.

2-92-2, **Snowy Plover** - Bill Pulliam. Accepted (8). Detailed reports with clear photographs. Bird was photographed on North Island, Georgetown County. Bird added to the SC Definitive list on the basis of this report, and photographs. This is also the first documented report for the state.

5-92-1, **Black-headed Grosbeak** - Sam Brayshaw. Accepted (7), Unsatisfactory (1). At least two specimens exist for the state. The one dissenting vote was based on the fact that the underwing was not seen for this female-plumaged bird, and the description of a white blob below the eye would tend to indicate a Rose-breasted Grosbeak, or a hybird. Time of observation (May) fits several other records.

5-92-2, **Masked Booby** - Steve Patterson. Accepted (7), Unsatisfactory (1). Well detailed report. One reviewer felt that the bird's description did not necessarily exclude a juvenile Northern Gannet, in transitioneal plumage. Also the bird was reported to be about the size of a gannet, wheras a booby should be several inches shorter.

5-92-3, **Arctic Tern** - Steve Patterson. Accepted (4) Unsatisfactory (3). The bird was sighted by Steve and others well offshore from the Charleston harbor. Two reviewers felt that the apparent lack of translucency in the wing would rule out Arctic. A third reviewer felt that the bill description did not rule out some other species. Accepted by a narrow margin. Added to the state Provisional List.

5-92-4, **Curlew Sandpiper** - James E. Lyons. Accepted (7). The bird was seen by several observers and photographed, in alternate plumage, on North Island, Georgetown County. This report adds the species to the SC Definitive List, only one year after the first sight report.

9-92-2A & B, **Sabine's Gull** - Roger McNeill & Les Todd. Accepted (9). Two very good reports of the same occurrence, near the outer breakwater at Charleston. While the bird is on the Definitive List from photographs taken near Georgetown, it remains one of our rarest vagrants. All reports need to be documented.

10-92-2, **Rough-legged Hawk** - John T. Fulton. Accepted (7) Unsatisfactory (2). The report was from Pinckney Island NWR. The bird was seen by several observers, though only one documented it. Two reviewers felt that the possibility of a Red-tailed Hawk was not sufficiently discounted.

11-92-1, **Black Guillemot** - Ted Buerger. Accepted (9). The bird stayed at Murrell's Inlet most of the winter. Buerger's photograph is conclusive, and adds the species to the SC Definitive List. This was also the first state sighting of the species.

12-92-1, **Spotted Sandpiper** - Peter Worthington. Accepted (9). One of the very few upstate winter records. Coneross Park, Lake Hartwell, on Clemson's Christmas Count. A bird of this species was reported on a Clemson count in 1974.

12-92-2A & B, **Pacific Loon** - Caroline Eastman, Dennis Forsythe, Nathan Diaz. Accepted (unanimous in the aggregate of three reports). The bird was seen at Murrell's Inlet, at least until 30 December. This smallish bird with a small dagger bill was seen by many observers, including the writer. Discussion centered as to whether this was a Pacific or an Arctic, which is known to breed in Iceland, Scotland, etc. Based on the lack of white flank patches (personal observation) and the fact that Grant does not report any tendency of westward vagrancy, even by Iceland birds, the committee agreed to assign it to the Pacific species, rather than as an Arctic/Pacific pair. As no photograph was taken, the species is placed on the Provisional I List.

12-92-3, **White-fronted Goose** - Stuart Reitz. Accepted (7). Two birds at Clemson's Horse Farm, where they over-wintered. One of very few documented upstate records.

1-93-1, **Thayer's Gull** or **Hybrid**. Rejected, Insufficient details (4) Abstain (3), Outside review by Mike Tove. The bird was seen at Horry County landfill, and the report is accompanied by an excellent sketch. The reviewers generally felt that the bird represented a transitional 1st winter to spring plumage of a Ring-billed Gull, with the outside possibility of Ring-billed X ? Gull. The apparent size (larger than a Ring-billed Gull) might be explained by the bird being out of plane with other gulls, or just an unusually large specimen. Size range is quite large in Ring-billed Gulls. The bird does not resemble plumages reported for Thayer's Gull on the west coast.

1-93-2, **Rough-legged Hawk** Rejected (5) Accept (2). The bird described was most likely a dark phase Red-tailed Hawk.

6-93-1, **Arctic Tern** - Nathan Diaz, countersigned by Edwin L Blicht III. Accepted (5) Unsatisfactory (2). Report is of three birds seen 48 mi NE of Charleston Harbor. Of concern to some of the reviewers was the late date. Also one reviewer felt that the description did not completely eliminate a female Common Tern. The species remains on the Provisional List.

8-93-1 & 1A, **Blue-throated Hummingbird** - Peter Worthington. Accepted (5) Insufficient details (1). This was the first sighting of the species outside of the Southwest. The bird was found at a suburban yard in Laurens County, and was present for some time in late July and early August before the writer was notified. One of the reviewers accepting the identification voted "questionable origin", due to the almost inconceivable dislocation of the bird. Added to the Provisional I List.

8-93-2, **Reddish Egret** - Gary A Klue. Accepted and filed without review. The bird was photographed at Seabrook Is., Charleston County, and was present for some time. There have been several prior coastal records of the species. Occurrences in the Piedmont and Upstate still need documentation.

10-93-1, **Olive-sided Flycatcher** - Robin Carter. In review.

12-93-1, **Little Gull** - Robin Carter. In review.

| | |
|---|---|
| Committee Members | Peter L. Worthington, Chairman |
| | Robin Carter |
| | John Cely |
| | Roger Clark |
| | Steve Compton |
| | Dennis Forsythe |
| | Sidney Gauthreaux |
| | Lex Glover |
| | Peter Laurie |

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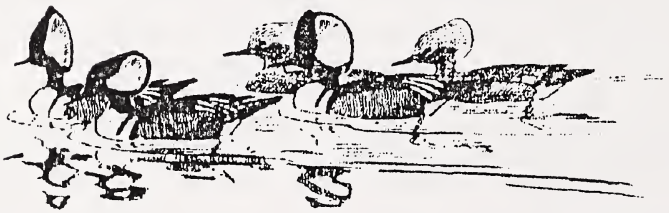

# General Field Notes

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## NOTICE

Publication of any unusual sightings of birds in the Field Notes or Briefs for the Files does not imply that these reports have been accepted into the official Checklist of Birds records for either North or South Carolina. Decisions regarding the official Checklists are made by the respective State Records Committees and will be reported upon periodically in THE CHAT.

## Western Grebe at Cape Hatteras, N.C.

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Paul Lehman and several other officers of the American Birding Association were birding at the large tidal pond at Cape Hatteras point, N.C., on 8 November 1993. They observed a Western Grebe (*Aechmophorus occidentalis*) at leisure, and Shawneen Finnegan and Ken Hollinga obtained photographs.

The bird was seen on both 9 and 10 November by other birders, and I observed it on 11 November with Russ Tyndall. We saw the bird from 150 to 300 yards for at least 20 minutes.

The bird was quite obvious to the naked eye, with its foot-long white neck with a narrow black line along the back of the neck immediately apparent. The upperparts were black and sharply contrasting with the white of the lower parts of the head and neck. The head had black feathers that extended downward to include the feathers that surrounded the bright red eye; a black tuft on the top of the head was quite noticeable. The long bill, about the length of the head, was slightly upturned and was a greenish-yellow or straw yellow in color. The bird's back was hardly longer than the length of the neck, which was held erect or with a slight swan-like curve. The back was black but shaded to a mottled blackish color toward the rump.

At one point, we watched a Pied-billed Grebe (*Podilymbus podiceps*) swim adjacent to the Western Grebe. The Pied-billed Grebe appeared to be about

50–60% of the body length of the Western Grebe, and its neck was probably less than half as tall as that of the Western Grebe.

The Western Grebe remained on the pond until mid-December, and it was seen by dozens of birders. It disappeared for several weeks, but was rediscovered on the adjacent ocean on 29 December by Steve Dinsmore.

There are several previous sight records of "Western Grebe", essentially all of which were observed before the taxon was split into two species—the Western Grebe and the Clark's Grebe (*Aechmophorus clarkii*). The North Carolina Bird Records Committee has accepted only one of these records, the the Western species. Clark's Grebe is essentially unreported in the eastern United States. The Western Grebe has black coloration of the face that includes the feathers surrounding the eyes, and it has a greenish-yellow bill; the Clark's Grebe has less black on the face such that the eye is surrounded by white feathers, and the bill is a bright orange-yellow color.

This is the first record of Western Grebe that has been documented by photographs in North Carolina. Because the species currently is listed on the Provisional List, the written descriptions from Paul Lehman and the author, and photographs taken by Shawneen Fennegan, will be reviewed by the North Carolina Bird Records Committee.

## Spring Migration of Seabirds off Central North Carolina: 22 May 1992, with Notes on two Skua (*Catharacta*) Taxa

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The concentration of pelagic seabirds and other marine biota along frontal eddies of the western edge of the Gulf Stream in the northern summer is a well-documented phenomenon (Haney and McGillivary 1985, Haney 1986a-c) and is well-known to sports fishermen in the Southern Atlantic Bight. Less material has been published, however, on the concentration of migrants along this front in the northern spring. The timing of the spring migration varies over the three-week period extending from the second week in May through about the first week in June at these latitudes, with significant but lesser movement of terns, jaegers, skuas, shearwaters, and storm-petrels on either side of this period. An excursion of 22 May 1992 yielded a diversity and density of species that advances our assessment of spring bird migration off North Carolina.

This accounting of an OBServ Tour aboard the *Country Girl* out of Manteo includes commentary on a large aggregation of Arctic and Roseate Terns (*Sterna paradisaea* and *S. dougallii*) for North Carolina, as well as notes on a skua of the Great Skua complex (*Catharacta skua/antarctica*) observed. Inasmuch as relatively few public pelagic excursions have been chartered off North Carolina's Outer Banks in the spring, this information may be useful to students of seabirds planning spring excursions in the future.

The transect for 22 May ran from Oregon Inlet southeast to the edge of the Gulf Stream, north roughly to the tower at 36° 04' N, 74° 58' W, and back to Manteo via Oregon Inlet. The majority of the birds observed were along the northbound leg, in between about twenty and forty fathoms of water. One exception was a single Manx Shearwater (*Puffinus puffinus*), seen about one nautical mile east of Oregon Inlet. That species, regularly recorded in the Gulf Stream in the spring (Lee, in ms.), also passes off Virginia in late May and early June with flights of larger shearwaters and has been recorded from shore at Cape Point, North Carolina on several occasions (i. e., Buckley 1973), as recently as 28 May and 3 June 1993 (2 each date, pers. obs.).

The other birds seen, especially the terns, were possibly more concentrated and numerous than one might expect, because the central western North Atlantic had experienced six days of unabated northeast winds, from 10–35 knots. 23 May was the final day of the system, with intensity gradually lessening during the day. For most of 22 May winds were northeast at 15-20 knots, with seas at 4-6 feet.

Typically, terns and shearwaters feed along the turbulent fronts between the cooler waters of the Continental Shelf and warm Gulf Stream waters — "the change," as fishermen call it — which causes nutrient upwelling and hence blooms of phytoplankton, as well as concentrating prey items and *Sargassum* (Yoder et al. 1983). What was striking about 22 May was the number of birds, especially of terns. Between 0800 and 1545 EST, we tallied 284 white terns: 119 Common (*Sterna hirundo*), 7 adult Roseate, and 27 adult Arctic Terns. 131 *Sterna*, although not especially distant, were recorded as "unidentified." My most conservative estimate is that 20-25 of the latter terns were adult Arctics.

The status of Arctic Tern off North Carolina has undergone rapid revision in the last decade. Lee and Booth (1979) felt Arctic Tern to be a very rare transient in the central western North Atlantic during the third week of May. More recently, Arctic Tern has been considered a very uncommon (Lee 1986) or a "rare offshore migrant" (LeGrand 1991) in small numbers off the North Carolina coast in the spring, with single digits being the rule. To judge from this excursion's 40+ Arctic Terns (and from a 24 May 1992 trip out of Hatteras Harbor, which recorded between 27 and 36 Arctics), it is clear that Arctic Tern is an uncommon migrant is moderate numbers. Richard Rowlett's offshore counts of *Sterna* following the passage of Hurricane *David* provide a previous maximum count for Arctic Tern in North Carolina, 30 on 10 September 1979, and the current maximum count for Roseate, 10 on the same date. Interestingly, Rowlett's numbers for 8-10 September yield a proportion of (positively identified) Common:Arctic:Roseate very close to that of the 22 May count, about 20:3.5:1 (Fussell and Allen-Grimes 1980). These September counts are storm-associated, however, and not representative of autumn counts; Arctic Tern is primarily a spring migrant and is very seldom encountered at sea off North Carolina in the autumn, owing to a southbound migration route through the eastern North Atlantic (Salomonsen 1967).

Lee and Cardiff (1993) summarize 61 records of Arctic Tern in the southeastern United States through 1991 and attribute the species' scarcity in spring to a migration route seaward of most seabird research and to the recessed coast of the southeastern United States. Observations subsequent to

this period support their findings. The spring migration of 1991 was marked by weather conditions similar to 1992, with "a strong back-door cold front" moving through the Carolinas on 18 May, with easterly and northeasterly winds persisting for several days thereafter. LeGrand (1992) notes "the best flurry ever for spring sightings" of Arctic Tern for 1991 and speculates that "the winds might also have dammed up the northbound migration of the terns" (records of 3, 3, 5, 8 birds on 4 trips between May 11-26). It appears then, for part of their northward migration, that Arctics stay well to the east of the Gulf Stream's western wall and are only occasionally brought westward by frontal systems with an easterly component. Given that strong northeasterly winds routinely cause the cancellation of pelagic excursions, it would under such circumstances be likely that many more Arctic Terns pass through the waters of the Continental Shelf than have been detected thus far. The spring of 1993, characterized predominantly by westerly winds, saw eight pelagic excursions May 15-June 9; none recorded Arctic Tern, and all trips combined saw a total of only 20 Common Terns.

The number of Roseates observed is equally unusual. LeGrand (1991) notes that Roseates "are practically never seen on pelagic trips"; this trip's participants watched four Roseates hovering together over a large mat of Sargassum, feeding on small fish. Aside from Rowlett's storm-associated counts, there are few records of multiple Roseate Terns off North Carolina in spring.

In most cases, terns could be studied at very close range (2-10 meters), since they formed dense feeding flocks directly over "the change," which despite rough weather was relatively well-defined. Rather than advancing rapidly toward a flock, Capt. Foreman allowed the boat to drift slowly into the feeding group; as a result, the boat was frequently engulfed by calling, diving terns. The tern flocks were very attractive to jaegers, especially Parasitic (*Stercorarius parasiticus*) and Long-tailed (*S. longicaudus*) Jaegers: two of the former and four adults of the latter were seen in pursuit of Arctic Terns. Very few terns were found away from the change, and flocks of 15-40 terns were found at regular intervals, about every 3-4 nautical miles.

On this trip it was apparent that, for participants who had not regularly seen Arctic Terns, especially in company with Common Terns, distinguishing the two species at sea was difficult. With experience, the flight characters of Arctic Tern provide a good shortcut for singling out birds for plumage study: a long tail and relatively small bill and small rounded head make this species' wings appear "set far forward on its body" (Kaufman 1990). Kaufman also notes that "its flight looks especially buoyant: the upstroke of the wings is quick, and the following downstroke is a slow, emphasized motion; the bird seems to float through the air" (see also Finch et al. 1978, Stallcup 1981). Commentators on Arctic Tern in North Carolina have noted the difficulty in identifying Arctics as a hindrance to determining their relative abundance, but with the fresh plumage of spring adults, this should become less problematic, as pelagic observers increase their familiarity with the species.

Associated with about fifty percent of the tern flocks, small shearwater and storm-petrel groups were attracted to the same areas and fed on the water's surface. Greater, Sooty, and Cory's Shearwaters (*Puffinus gravis*, *P. griseus*, and *Calonectris diomedea*) were seen, as well as a single Northern Fulmar

(*Fulmarus glacialis*). These in turn attracted South Polar Skuas (*Catharacta maccormicki*) and Pomarine Jaegers (*Stercorarius pomarinus*). Five South Polar Skuas were seen; previous maximum counts for North Carolina include four off Beaufort Inlet 29 May 1987 and four off Oregon Inlet 25 May 1991 (LeGrand 1988, 1991). In several cases, South Polar Skuas actively harassed Greater and Cory's Shearwaters, with one skua alighting on the back of a Cory's in mid-air and pushing the shearwater down to the water, forcing it to disgorge food.

Another skua (seen very near 36° N, 75° W) was clearly not a South Polar; the bird was either an old or aberrantly plumaged nominate Great Skua (*Catharacta [skua] skua*) or, perhaps as likely, a member of the southern part of that complex, currently classified by authorities as *C. (skua) antarctica*, the Antarctic Skua. Great Skua has not been recorded on in spring off New Jersey or other mid-Atlantic states, but probable Antarctic Skuas have been photographed at Hudson Canyon on 28 May 1977 (photograph in *Am. Birds* 32:1108; P. Buckley, A. Brady, pers. comm.) and off New Jersey on 29 May 1987 (Brady 1988). I can find no confirmed spring records of *C. skua* for the central western North Atlantic; records prior to the late 1970s identify all spring skuas as Great Skua.

Despite these records, I suspect that it is now generally taken for granted by many that spring skuas at these latitudes are South Polars. North Carolina has four Great Skua specimens: one from Cape Lookout from 29 December 1975 (banded at Kvisker, Iceland, as a juvenile on 24 July 1975; Lee and Booth 1979; Lee and Rowlett 1979), one from north of Cape Hatteras Point (NCSM 8171), another from Fort Macon State Park from 10 January 1989 (NCSM 16006; LeGrand 1990), and a fourth specimen taken at sea off North Carolina (NCSM 11747; Lee, in ms.). A skua recorded by Rowlett and Edsburg from shore at Pea Island on 18 February 1974 probably refers to this species (Dumont and Dumont 1975), and Lee has seen several others off Oregon Inlet. A Great Skua was photographed off Cape Lookout on 3 April 1993 by A. Bryan (*Am. Birds* 47.3:404). The species has thus been documented as a regular, but very uncommon, visitor in North Carolina waters in the winter months, as it has been in southern Virginia waters (Patteson and Brinkley 1994). It is unclear what taxon of skua occurs in late October off Oregon Inlet (Allan Foreman, pers. comm.), but it may be that early Great Skuas begin to appear at this time.

My description of the skua in question is as follows: "*Catharacta*, NE Oregon Inlet, ca. 25 fthm. Flat wood-brown skua in worn plumage; molt of 1-2 inner primaries apparent from 15-20 m. Light on the bird was good, adequate to distinguish several plumage aspects: underparts even brownish with two pale, oblong patches on either side of the breast; a brownish back heavily spangled with dollops of whitish-gold, marks irregular in size and distribution. The strongly marked dorsal surface, which extended to some degree onto the upperwing coverts, was startlingly different from previous 4 skuas seen [and from a last skua seen 20 minutes later], enough so for me to comment on it to a participant: 'Look at the back on that one — really different from the other intermediates we've seen.'"

"Intermediates" here refers to so-called intermediate-morph South Polar Skuas, which I had presumed our skuas to have been until Brian Patteson mentioned Alan Brady's *antarctica* reports, which I had not reviewed. The

plumage characters noted in the field rule out South Polar Skua, although they may not exclude aberrant Great Skua; they most strongly suggest one of the *antarctica* group, possibly the "Brown" Skua (*C. a. lönnbergi*), the taxon suspected in the 1977 photograph (*Am. Birds* 32: 1108). "Tristan" Skua (*C. a. hamiltoni*), the suspect in the 1987 report, would seem less likely, in that the body in that subspecies is strongly marked with ruddy, as in Great Skua (see Devillers 1977). The same holds for the "Falkland" Skua (*C. a. antarctica*), a taxon that also typically shows a cap, like the Great Skua. In general, the bird seemed large, rangy, and dishevelled — partly the product of molt, but also of apparent size. The general condition of the plumage resembled that of Brady's bird on the cover of *Cassinia* 62, although the upperparts bore larger pale spangles. South Polar Skua typically shows pale or gold feathering in the nuchal area and can show pale feather edges in the mantle, but this is a mottled or clouded look with dull sandy rather than gold tones (see "adult atypical," plate 413, Harrison 1987).

It is important to note that the individual was just beginning molt: one or two inner primaries were missing. Great Skua should have completed its molt by mid-March at the latest (Cramp and Simmons 1983), and indeed skuas observed off Virginia and Maryland in February (1978-1992) are typically finishing a molt of the primaries (pers. obs.). Alan Brady notes that his spring *antarctica* was in molt in May 1987. Molts of most southern skuas are so incompletely known, however, that to identify them on this basis is impossible; the susceptibility of individual molt to alteration by age, illness, or injury also makes that information only marginally useful.

It is conceivable that other southern skuas follow northbound South Polars (and other southern hemisphere species) into the northern hemisphere. The limits of nonbreeding antarctica dispersal are not well-known. Hudson (1968) documents an adult *lönnbergi* from the Caribbean, a bird banded as an adult on Deception Island in the Antarctic (27 January 1960) which was caught by a fisherman off the Îles des Saintes, Guadeloupe, on 17 May 1967. Furness (1987), however, discounts that record. Devillers (1977) cites the possibility for transequatorial movement in *lönnbergi*, noting a September 1933 specimen from Kerala, India. The wintering range of *hamiltoni* is "quite unknown" (Furness 1987). It should be noted that Great Skua does have a post-juvenile molt (March-August of the second calendar year), but Cramp and Simmons describe that age as "cinnamon-brown" below and heavily streaked with black, pale, and rufous above — quite unlike the North Carolina individual. Information on post-juvenal plumages of all *Catharacta* is largely unavailable, since members of the genus typically spend several consecutive years at sea before returning to the nesting areas (Furness 1987).

The underwing, often erroneously cited as a key feature in the identification of skuas, was not studied; in South Polar, it is blackish-brown and contrasts sharply with the paler underparts in light and intermediate morphs (Harrison 1985). This is not a diagnostic attribute, since ventrally pale Great Skuas show the same contrast (Lansdown 1993a-b; pers. obs.). According to Lansdown, field characters once thought reliable in identifying South Polar Skuas (pale nape, smaller size, smaller bill, less white in the base of the primaries) have been shown by some Great Skuas (probably subadult) off the British Isles. In the case of ventrally pale Great Skuas, however, there is "a

direct relationship between [its] pale upperparts markings and its paleness below: those individuals with the palest underparts also have the most strongly pale-streaked and pale-mottled upperparts." Normally, South Polar has "unmarked, cold-toned, dark brown upperparts," in contrast to Great Skua's "warm-toned upperparts which are streaked and mottled to a variable degree." Pale South Polars can have "pale shaft-streaks and slender, pale tips to the scapulars and, more rarely, to the upperwing-coverts." These markings, however, "are too fine to be seen in the field other than in exceptionally close views."

It appears that the 22 May bird, a cold-brown bird with heavily marked upperparts, a bird lacking rufous tones in the upperparts and underparts and lacking a cap or hood, does not fit published descriptions and photographs of either Great or South Polar Skua (see also Balch 1981). The description is consistent only with photographs of light- or medium-light Brown Skua: "fairly uniformly colored, head and upperparts medium brown," "lighter brown below," with "very large blotches on the scapulars" (Peter et al. 1990).

Recent research indicates that Brown and South Polar Skuas hybridize to a limited extent on the Antarctic Peninsula, South Shetland Islands, and South Orrkey Islands (Parmelee 1988). Parmelee's extensive experience with both species and their hybrids suggests that first-generation hybrids look "like small *lönnbergi* but behave like *maccormicki*" — this includes their "mating, feeding, and migratory behavior." It does not necessarily follow that the hybrids' molt should resemble that of *lönnbergi*, or that the nonbreeding range of hybrids should resemble that of *maccormicki*, but Parmelee does write, based on a single banding return, that "hybrid skuas behave like South Polar Skuas in that they migrate at least as far north as Brazil." Parmelee offers no data on molt schedule for hybrids, and the molt of *lönnbergi* is "not well known" (Furness 1987). South Polar Skuas molt from late May through July (Devillers 1977; Veit 1978), "after they have moved to their wintering areas" (Furness 1987), which includes the Southern Atlantic Bight for a few individuals.

The existence of hybrids means that no sight or photographic record of Antarctic Skua from the North Atlantic is above suspicion. Although some researchers feel that *antarctica* skuas may only be part of a complex that includes Great Skua, others feel confident that research on the molecular level will define all allopatric southern skuas as distinct species. Thorough photographic documentation can be suggestive but not sufficient to determine the taxonomic status of Antarctic Skuas in the North Atlantic; a specimen would be desirable to confirm a third taxon of skua for this region.

Other species observed on this trip were 18 Bridled Tern (*Sterna anaethetus*), one adult Black-legged Kittiwake (*Rissa tridactyla*), one Black-capped Petrel (*Pterodroma hasitata*), 172 Wilson's and one Leach's Storm-Petrel (*Oceanites oceanicus* and *Oceanodroma leucorhoa*), 9 Common Loon (*Gavia immer*) feeding well offshore (over 20 fathoms), one juvenile Northern Gannet (*Morus bassanus*) inshore, 66 Red-necked and one Red Phalarope (*Phalaropus lobatus* and *P. fulicaria*), and six Common Eider (*Somateria mollissima*) at sea, over about 12 fathoms, the latter the only at-sea record from North Carolina. The mixture of tropical, temperate, and boreal species is typical of North Carolina waters at this time of year, although the count of 18

pelagic species is well above the average for a single day (Lee and Booth 1979).

Much of what is known about spring migration at these latitudes has only appeared in the past several years, and much remains to be learned. With the steady increase in pelagic excursions available to the public at this time of year, students of seabirds can and should continue to contribute important documentation of this very exciting phenomenon.

## LITERATURE CITED


Balch, L. G. 1981. Identifying skuas in the ABA area. Birding 13.6: 190-201.

Brady, A. 1988. Possible presence of an Antarctic Skua in New Jersey waters. Cassinia 62: 7-11.

Buckley, P. A. 1973. A massive spring movement including three species new to North Carolina at Cape Hatteras National Seashore. Am. Birds 27.1: 8-10.

Cramp, S. and K. E. L. Simmons (eds.). 1977. Handbook of the Birds of Europe, the Middle East, and North Africa. Vol. 3, Waders to Gulls. Oxford. Oxford University Press. 722 pp.

Devillers, P. 1977. The Skuas of the North American Pacific Coast. Auk 94 (July): 417-429.

Devillers, P. 1978. Distribution and relationships of South American skuas. Le Gerfaut 68:374-417.

Dumont, P. G. and P. A. Dumont. 1975. Birds of the Season, Dec. 1973 through Feb. 1974. Atlantic Naturalist 29:175.

Finch, D. W., W. C. Russell, and E. V. Thompson. 1978. Pelagic Birds in the Gulf of Maine. Am. Birds 32.2: 140-155, 32.3:281-294.

Furness, R. W. 1987. The Skuas. Staffordshire. T & A D Poyser. 363 pp.

Fussell III, J. O. and A. Allen-Grimes. 1980. Bird sightings associated with Hurricane David. Chat 44.4 (Fall): 89-100.

Haney, J. C. 1986a. Remote sensing of seabird environments. Am. Birds 40.3 (Fall): 396-400.

Haney, J. C. 1986b. Seabird segregation at Gulf Stream frontal eddies. Marine Ecology Progress Series 28: 279-285.

Haney, J. C 1986c. Seabird affinities for Gulf Stream frontal eddies: Responses of mobile marine consumers to episodic upwelling. Journal of Marine Research 44: 361-384.

Haney, J. C. 1988. Feeding on the fly: ocean fronts gather plankton, fish, seabirds, pollution. Natural History 97.8 (August): 32-39

Haney, J. C and P. A. McGillivray. 1985. Aggregation of Cory's Shearwaters (*Calonectris diomedea*) at Gulf Stream fronts. Wilson Bull. 97: 191-200.

Harrison, P. 1985. Seabirds: an identification guide. Boston. Houghton Mifflin. 448 pp.

Harrison, P. 1987. A Field Guide to Seabirds of the World. Lexington, Massachussetts. Stephen Greene. 317 pp.

Hudson, R. 1968. The Great Skua in the Caribbean. Bird Study 15.1 (March): 33-34.

Kaufman, K. 1990. Advanced Birding. Boston. Houghton Mifflin. 299 pp.

Lansdown, P. 1993a. Separation of South Polar Skua from Great Skua. British Birds 86:218-19.

Lansdown, P. 1993b. Mystery photographs. British Birds 86:176-77.

Lee, D. S. 1986. Seasonal distribution of marine birds in North Carolina waters, 1979-1986. Am. Birds 40.3: 409-12

Lee, D. S. in ms. Identification and distribution of skuas off the southeastern United States

Lee, D. S. in ms. Manx Shearwater (*Puffinus puffinus*) off the southeastern United States.

Lee, D. S and J. Booth, Jr. 1979. Seasonal distribution of offshore and pelagic birds in North Carolina waters. Am. Birds 45.3: 715-721.

Lee, D. S and R. A. Rowlett. 1979. Additions to the seabird fauna of North Carolina. Chat 43.1: 1-9.

Lee, D. S and S. W. Cardiff. 1993. Status of the Arctic Tern in the coastal and offshore waters of the southeastern United States. Journal of Field Ornithology 64.2: 158-68.

LeGrand, Jr., H. E. 1988. Briefs for the files. Chat 52.2: 46.

LeGrand, Jr., H. E. 1990. Briefs for the files. Chat 54.1: 25.

LeGrand, Jr., H. E. 1991. Seasonal report (Southern Atlantic Coast region). Am. Birds 45.3.

LeGrand, Jr., H. E. 1992. Briefs for the files. Chat 56.2: 37-41.

Lockley, R. M. Ocean Wanderers: The Migratory Seabirds of the World. Harrisburg, Pennsylvania. Stackpole. 168 pp.

Parmelee, D. F. 1988. Hybrid skua: southern ocean enigma. Wilson Bull. 100.3 (September): 345-356.

Patteson, J. B. and E. S. Brinkley. 1994. Birding pelagic frontiers: Virginia, Maryland, and North Carolina. Winging It (Jan.): 1, 4-8.

Peter, H.-U., M. Kaiser, and A. Gebauer. 1990. Ecological and morphological investigations on South Polar Skuas (*Catharacta maccormicki*) and Brown Skuas (*Catharacta skua lönnbergi*) on Fildes Peninsula, King George Island, South Shetland Islands. Zoologisches Jahrbuch für Systematik 117: 201-218.

Salomonsen, F. 1967. Migratory movements of the Arctic Tern (*Sterna paradisaea*) in the southern ocean. K. Dan. Vidensk. Selsk. Biol. Medd. 24: 1-42.

Stallcup, R. W. 1976. Pelagic birds of Monterey Bay, California. Western Birds 7: 113-136; revised as reprint, 1981, from Western Field Ornithologists.

Veit, R. R. 1978. Some observations of South Polar Skuas (*Catharacta maccormicki*) on Georges Bank. Am. Birds 32: 300-302.

Yoder, J. A., L. P. Atkinson, T. N. Lee, H. H. Kim, and C. R. McClain. 1981. Role of Gulf Stream frontal eddies in forming phytoplankton patches on the outer southeastern shelf. Limnology and Oceanography 26: 1103-1110.

RICKY DAVIS
(All dates Summer 1993)

COMMON LOON: A bird in alternate plumage was found resting on a canal bank near the Alligator River NWR, NC on 14 July by Harry LeGrand. The bird was apparently sick or injured but still was a surprising find for the summer season.

HORNED GREBE: Several late or lingering birds were found in North Carolina this season. Two were at Portsmouth on 3 June (Steve Dinsmore) and one in breeding plumage was seen at Cape Hatteras until 20 June (Roger McNeill and several others).

BLACK-CAPPED PETREL: All pelagic trips that ventured into deeper waters off North Carolina found this species in good numbers; and the 22 off South Carolina on 10 July (Todd Hass) was a good count for that state.

HERALD PETREL: A dark phase individual was seen off Oregon Inlet, NC on 31 July (Brian Patteson, et. al.) for a good find. This species has been seen each of the last several years and is being found more regularly offshore.

CORY'S SHEARWATER: A very good total for South Carolina was the 677 seen off that state on 27 July by Todd Hass. He also reported 375 Audubon's that trip for another good total.

GREATER SHEARWATER: This species was recorded in better than average numbers all season. Good counts included 117 off South Carolina on 27 July (Todd Hass) and 168 off Oregon Inlet, NC on 31 July (Brian Patteson, et. al.). Also one was found washed up on Battery Is., NC on 26 June (Russ Tyndall, et. al.).

LEACH'S STORM-PETREL: The best count of the summer was the 37 found off Oregon Inlet, NC on 7 June (Armas Hill, et. al.).

WHITE-FACED STORM-PETREL: An individual at close range on a trip off Oregon Inlet, NC on 24 July (Mike Tove, et. al.) provided an early record for the state.

BAND-RUMPED STORM-PETREL: This species was found off both states this season with the 29 off Oregon Inlet, NC, 17 July (Brian Patteson, et. al.) and the 5 off McClellanville, SC, 1 August (Todd Hass) being the highlights.

WHITE-TAILED TROPICBIRD: This species was found in good numbers offshore with birds reported off Oregon Inlet, NC on 19 June, 17 July, and 24 July by several fishing boat captains. Also on 24 July an adult was seen by Mike Tove and party in nearby waters. One adult off Hatteras, NC on 24 July was seen by Steve Dinsmore. Not to be outdone, South Carolina had a report of two adults off Charleston on 28 July (Todd Hass).

MASKED BOOBY: The only report for summer was one off Cape Lookout, NC in mid-July (Sonny Hyman, fide John Fussell).

MAGNIFICENT FRIGATEBIRD: On an Armas Hill pelagic trip off Cape Hatteras, NC on 7 June, three frigatebirds were seen circling higher and higher until out of sight! This species is rare but regular along the coast but 30 miles offshore is a very unusual report.

GREAT CORMORANT: The usual summer lingerers were found, with one at W. Onslow Beach, NC on 19 June (Eric Dean) and two at Masonboro Inlet, NC on 1 July by Sam Cooper.

LEAST BITTERN: Reports of this species are few and far between, thus encouraging was John Fussell's noting that they are still fairly common at Pamlico Point, NC in June.

AMERICAN BITTERN: One heard calling along the headwaters of the Wando River in Charleston County, SC on 1 June (Robin Carter, Caroline Eastman) was a surprise. Was it a late migrant?

YELLOW-CR. NIGHT-HERON: A pair spent the summer in Greensboro, NC, but no evidence of breeding was found (Herb Hendrickson). The other reports involved wandering birds such as an adult at Jordan Lake, NC 19 July (Doug Shadwick), one immature at a pond near Raleigh, NC 20 July (Sam Cooper), and an immature in Abbeville County, SC on 14 July (Tim Kalbach).

BLACK-CR. NIGHT-HERON: The only inland report was of an immature in western Forsyth County, NC on 30 July (Gray and Harrison Tuttle, fide Ramona Snavely).

TRICOLORED HERON: Post-breeding wanderers were found inland at Goldsboro, NC 20 July (Gene Howe) and Jordan Lake, NC 19 July (Doug Shadwick).

REDDISH EGRET: The only summer report was of the usual bird in the Sunset Beach, NC area in July (Eric Dean).

WHITE IBIS: In North Carolina wandering immatures were inland at Wilson 1 July (Sam Cooper), Falls Lake 18 July (Ricky Davis), and Jordan Lake 19 July (Doug Shadwick).

GREEN-WINGED TEAL: One near New Bern, NC on 24 July (Bob Holmes) was probably an early migrant.

LINGERING WATERFOWL: A Pintail at Pamlico Point, NC 15 June (John Fussell), a female Am. Wigeon at Pea Is., NC 20 June (Harry LeGrand, Mike Tove), a pair of Ring-necks at Santee NWR, SC 5 June (Lex Glover, et. al.), and a Lesser Scaup at Pamlico Point, NC in June (John Fussell) were all obviously late birds. An eclipse male Am. Wigeon at New Bern, NC 24 July (Bob Holmes) probably summered at that spot. A female Ring-neck at Sim's Pond near the Blue Ridge Parkway, Watauga County, NC on 22 June (Steve Dinsmore) was not only late but unusual. Also a female Common Eider spent the entire summer at Cape Hatteras, NC as noted by Steve Dinsmore and many observers. Finally, Red-br. Mergansers were found at Oregon Inlet, NC 7 July (Steve Dinsmore) and at Lake Russell, SC on 24 June (Tim Kalbach).

SWALLOW-TAILED KITE: Some summer records of this species included one near Oriental, NC on 15 June (John Fussell) and two at Cape Hatteras, NC on 23 June (Laurie Larson, Jean Bickall). In South Carolina one was seen along the Great Pee Dee River in Horry County on 4 July by Robin Carter and Caroline Eastman, which is near the northernmost breeding area in the state.

MISSISSIPPI KITE: This species is rare but regular in late spring and early summer on North Carolina's Outer Banks. This season there were three June reports with one at Buxton on the 6th (Russ Tyndall, Patricia

Earnhardt), one there on the 20th (Roger McNeill, Todd Hass, Mack Smith, Russ Tyndall), and one at Pea Island also on the 20th (Harry LeGrand, Mike Tove). In the Chapel Hill, NC area Todd Hass saw one on 26 July for a very rare local record. The count of 40 along the Great Pee Dee River in Marlboro County, SC on 1 June (Lex Glover, John Cely) was impressive.

OSPREY: This species nests sparingly inland, exclusively at large reservoirs with suitable nesting sites either natural or man-made. Thus records of nesting success are always noteworthy. Herb Hendrickson reported that Lake Townsend, Guilford County, NC had two nests with one to two young successfully being raised.

NORTHERN HARRIER: Breeding records of this species in North Carolina are always exciting. This season, Dinsmore photographed a nest with 5 eggs on Portsmouth Is. on 2 June. Later he observed a pair with two recently fledged young at Pea Is. in July.

SHARP-SHINNED HAWK: Sharpies were found several times throughout both states during the summer. The only record which might have suggested breeding activity was one near Lynn, Polk County, NC seen from 6 to 19 June carrying food (Simon Thompson).

COOPER'S HAWK: Nesting activity was observed in Orange County, NC with an adult and immature defending an area with a nest in June and July (Scott Hartley). This species was also seen at other sites in both states, but breeding evidence was not noted.

BROAD-WINGED HAWK: The most out of range Broad-wing this season was one acting territorial in Wilmington, NC on 27 June (Sam Cooper). Reports that close to the coast in summer are unusual.

AMERICAN KESTREL: A pair with an immature near Goldsboro, NC in June and July suggested definite breeding in the Coastal Plain of that state (Steve Dinsmore, Gene Howe). Also a pair in the Chimney Rock, NC area of the foothills in June and July (Simon Thompson) suggested local breeding.

RUFFED GROUSE: One seen on Sassafras Mountain, Pickens County, SC on 10 July (Robin Carter, Caroline Eastman) was a locally uncommon record. This species' status in the state is poorly known.

NORTHERN BOBWHITE: A high altitude record was provided by a bird calling in July at 6200' on Roan Mountain, NC in a spruce-fir clearing (Rick Knight)!

PIPING PLOVER: The only report of nesting success of this closely monitored species came from Steve Dinsmore who says Cape Hatteras National Seashore had 12 pairs fledging 9 young and North Core Banks had 27 pairs fledging 19 young.

WILSON'S PLOVER: A good count of 20 at the Savannah River Spoil Site, SC on 19 June was had by Bob Wood.

BLACK-NECKED STILT: The total of 30 at Pamlico Point, NC on 15 June (John Fussell) was good, but the count of 800+ at the Savannah River Spoil Site, SC 22 July (Lex Glover) was truly astounding!

SPOTTED SANDPIPER: Two nesting records for this species were had in Forsyth County, NC this season. Two newly hatched young and an adult were seen 31 July at a sewage plant (Doug DeNeve, et. al.). And at an-

other sewage plant four fledglings and two adults were seen 1 Aug by Reggie Burt and Joyce Mauch. Spotteds are very rare nesters in the state.

UPLAND SANDPIPER: Early migrants were one at Goldsboro, NC 25 June (Eric Dean) and one at the Orangeburg Sod Farms, SC on 26 June (Bruce Smart). The summer high count was 17 at the Orangeburg Sod Farms on 25 July (Roger McNeill).

LONG-BILLED CURLEW: The only summer report was one at Portsmouth, NC during June and July (Steve Dinsmore).

MARBLED GODWIT: Very rare transients inland, the Marbled Godwit was found twice. One was in Goldsboro, NC on 26 July (Eric Dean) and another was in Charlotte, NC on 1 August (Taylor Piephoff). These are possibly the 3rd and 4th inland records for the state.

SANDERLING: Steve Dinsmore has been studying the Sanderling along the Outer Banks of North Carolina for several years now. On 29 July he counted an impressive 9882 on the beach from Salvo to Cape Hatteras for an unusually high count.

RUFF: The only report of this rare sandpiper was of a male at Bodie Is. lighthouse pond, NC on 17 July by Steve Metz, et. al.

CURLEW SANDPIPER: The Outer Banks of North Carolina again had the only reports of this species. There were single adult birds at Clam Shoal, Pamlico Sound on 25 July (Steve Dinsmore, Ricky Davis) and Pea Is. on 23 July (Steve Dinsmore).

WILSON'S PHALAROPE: Dinsmore reported the only Wilson's with three birds at Pea Is., NC on 6–7 July and from one to two at Portsmouth, NC in July.

SOUTH POLAR SKUA: This species was reported twice off Oregon Inlet, NC with one on 7 June (Armas Hill, et. al.) and one on 24 July (Mike Tove, et. al.).

PARASITIC JAEGER: It is always unusual to see a jaeger on land in this area, thus a Parasitic at Cape Hatteras, NC on 20 June (Mike Tove, et. al.) must have been a surprise.

LESSER BLACK-BACKED GULL: This bird has been hanging around during summer the last couple of years, and Dinsmore found at least five different individuals along the Outer Banks of North Carolina during June and July to continue the trend.

LEAST TERN: Roof-top nesting Leasts were found again at a mall in New Bern, NC during June and July (Bob Holmes, Sam Cooper). Also one to two pairs attempted nesting at a mall in Wilmington, NC in June (Sam Cooper). If beach nesting sites continue to be disturbed, who knows how important roof-tops will become to the birds?

ROSEATE TERN: The only reports came from the Outer Banks of North Carolina as usual with single adults at Cape Lookout on 10 June and Cape Hatteras on 6 July (Steve Dinsmore).

SOOTY TERN: The Cape Hatteras, NC area again had summering Sooties with a peak of five adults 27–28 July (Steve Dinsmore). Courting was observed and Dinsmore later found hatching chicks for probably the first record of young of this species in the state. Also an immature was seen flying past Cape Hatteras point on 9 July (Pat Moore, Jane Farrell).

BLACK TERN: A good count for North Carolina was the 212 found at Portsmouth on 19 July (Steve Dinsmore).

COMMON GROUND-DOVE: As this species continues to decline in the Carolinas, all reports are worthy of mention. Especially rare was one found in southern Lee County, SC on 10 July (Robin Carter, Caroline Eastman) for a record away from the immediate coast.

BLACK-BILLED CUCKOO: The only report was the one heard calling in Great Sandy Run Pocosin, Onslow County, NC on 24 June (John Fussell). This location is very near the coast; was that bird a late migrant, or was it being territorial?

SCISSOR-TAILED FLYCATCHER: One found at the northern end of Ocracoke Is., NC on 30 June (Suzanne Wrenn, fide Steve Dinsmore) was the only report received.

GRAY KINGBIRD: Breeding took place this year at Debidue Beach, Georgetown County, SC. A pair was present in June (many observers) and on 13 July Lex Glover saw the pair plus an immature. The Carolinas are on the edge of the breeding range and future nesting attempts should be monitored as well.

PURPLE MARTIN: Martins routinely gather in large roosts during the summer, but the roost estimated at 25,000 birds at Lake Murray, SC on 31 July (Lex Glover, Robin Carter, Caroline Eastman, John Cely) was truly amazing.

CLIFF SWALLOW: This species continues to increase as a breeder at dams and bridges near large, inland reservoirs. Of special note was a nest found under a bridge over a non-impounded river in Union County, SC this summer (Tim Kalbach, fide Robin Carter). Also 20 nesting near Oriental, NC in June (John Fussell) was a good count for that coastal locality.

COMMON RAVEN: Ravens continue to show up at sites outside of the mountains. A pair was found at Hanging Rock State Park, NC on 1 June (Sam Cooper); one was at Sassafras Mountain, SC on 10 July (Robin Carter, Caroline Eastman); and a pair was at Chimney Rock, NC on 25 July (Simon Thompson). Breeding at any of these sites is not out of the question.

RED-BREASTED NUTHATCH: Birds again summered at the Walhalla Fish Hatchery in Oconee County, SC (Tim Kalbach). This is one of the very few possible breeding sites in the state for this species.

GOLDEN-CROWNED KINGLET: The Walhalla Fish Hatchery in Oconee County, SC again hosted summering birds (Tim Kalbach). As in the case of Red-br. Nuthatch, this area is one of the few places Kinglets have been found in summer in South Carolina.

HOUSE WREN: Summering House Wrens are often found in pocosin habitats in the coastal plain areas of the Carolinas. Thus one found in a farm setting in Pender County, NC on a BBS route (Sam Cooper) was a surprise.

WARBLING VIREO: The disjunct population at Santee NWR, SC was again present this summer with three singing birds noted on 5 June by a CBC field trip party.

BLUE-WINGED WARBLER: This species is not known to nest in the northern mountains of North Carolina. Thus the presence of from one to two males at New River State Park on 11 June (Harry LeGrand) and 22 June (Steve Dinsmore) was interesting.

PRAIRIE WARBLER: While conducting a BBS route in Alligator River NWR, NC, Merrill Lynch counted 93 Prairies! The date was 24 May and probably none of the birds recorded were migrants, so the number is all the more amazing. Next year's census should show if this was a fluke or not!

PROTHONOTARY WARBLER: The Alligator River NWR BBS route also produced an astonishing number of Prothonotaries. On the 24th of May, Lynch counted 70 birds, and let's hope this species can continue to do well here.

WORM-EATING WARBLER: A count of 24 on the Alligator River NWR BBS route on 24 May (Merrill Lynch) was indicative of a healthy population in that area. In South Carolina, one returned to Kingsville, Congaree National Monument as noted by Lex Glover. Could the bird be breeding in this area?

BLACK AND WHITE WARBLER: This species was noted in at least 7 different localities in McCormick County, SC (Anne Waters), making a good count for that area of the state. And a singing male near Society Hill, Darlington County, SC on 3 June (Lex Glover) was pushing the range limit for this species into the coastal plain.

AMERICAN REDSTART: Redstarts are not normally found in the coastal plain during summer, but this season breeding evidence was found in the Francis Marion National Forest, SC. On 19 June four singing birds were found (Lex Glover, John Cely) and on 25 June Nathan Dias and the Strattons saw a juvenile begging for food from a female Redstart!

SCARLET TANAGER: A Scarlet in Beaufort, NC in early June (Paula Ipoc, fide John Fussell) must have been a late migrant. Breeders were noted on the edge of the range in Richmond County, NC on 2 June (Kevin Hennings) indicating continued eastward expansion. Also in the Greensboro, NC area, Hendrickson observed that Scarlets now outnumber Summer Tanagers 3 to 1. This is a reversal in the trend from five years ago!

INDIGO BUNTING: A mated pair was noted in a clearing in spruce-fir forest at 6200' on Roan Mountain, NC all summer (Rick Knight). This is a high elevation, even for this species which seems to be doing well throughout the Carolinas.

PAINTED BUNTING: In the Carolinas reports of this species away from the coast are not the norm. Thus the report of 5 singing males on the Savannah River Plant lands during the summer (Barny Dunning) was encouraging.

DICKCISSEL: Breeding season reports of the erratic Dickcissel are always important. This year a pair was found at Goldsboro, NC which remained until 20 June (Gene Howe); a pair was seen in Gaston County, NC (Simon Thompson); and 3 males, 2 females, and a fledgling! were seen in Laurens County, SC during June and July (Tim Kalbach).

BACHMAN'S SPARROW: A good count of 13 birds at the Merry Oaks, Chatham County, NC site on 18 July (Roger McNeill) suggests that this species is still doing well in this area. Also one at nearby Jordan Lake on 5 July (Doug Shadwick) was less expected.

SAVANNAH SPARROW: This species is a very localized breeder in the northern mountains of NC. LeGrand found a new site for Alleghany County when one was singing on territory near Edmonds on 11 June.

HENSLOW'S SPARROW: During May John Wright checked the VOA sites in Pitt and Beaufort Counties for singing Henslow's. On the 16th he found 40 at VOA-B and on the 29th he counted 17 at VOA-A for very good totals. Let's hope these sites will continue to be mowed in a manner so as to not disturb the birds.

WHITE-THROATED SPARROW: A lingering bird frequented a feeder in Marion, SC until early June (May Gaude, fide Jack Peachey).

SHINY COWBIRD: This species is increasing in the Carolinas with two different birds at Figure Eight Island, NC (Derb Carter) and one at Cape Lookout, NC (Steve Dinsmore), both in June, adding to the records.

BOAT-TAILED GRACKLE: A rare local record was provided by a male at the Orangeburg Sod Farm, SC on 1 June (Robin Carter, Caroline Eastman). This was the second Orangeburg County record.

RED CROSSBILL: Crossbills were found at several sites in the North Carolina mountains this summer. Two were on Roan Mountain on 16 July (Rick Knight), 30+ at Balsam Gap on the Blue Ridge Parkway on 13 June (Kevin Hennings), and nearby Mt. Mitchell hosted several birds throughout the summer (many observers).

PINE SISKIN: The best Siskin reports were 15 at Balsam Gap on the Blue Ridge Parkway on 13 June (Kevin Hennings) and the discovery of a nest at Roan Mountain, NC on 13 July (Rick Knight).

Summer reports (June through July, 1994) for Briefs for the Files should be sent to the "Briefs" editor (for address see front inside cover) by August 20, 1994.

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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from state and federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O.Box 29555, Raleigh, N.C. 27626-0555.

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# The Chat

(USPS 101-020)

Quarterly Bulletin of Carolina Bird Club, Inc.
The Ornithological Society of the Carolinas
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# The Chat

Vol. 58 FALL 1994 No. 4

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Quarterly Bulletin of Carolina Bird Club, Inc.
The Ornithological Society of the Carolinas

# THE CHAT

VOL 58 (USPS 101-020) FALL 1994 NO. 4
Published by the Carolina Bird Club, Inc.

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THE CHAT (USPS 101-020) is published quarterly by the Carolina Bird Club, Inc., with headquarters at the North Carolina State Museum of Natural Sciences, 102 N. Salisbury Street, Raleigh, NC 27603 POSTMASTER: Send address changes to Carolina Bird Club, THE CHAT, P. O. Box 29555, Raleigh, N. C. 27626-0555.

PAGE CHARGES: Authors who have funds available for page charges are requested to remit same at the rate of $40.00 per page. CBC Headquarters will provide statements required for your business records.

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CBC

# North Carolina Bird List

North Carolina Bird Records Committee

This is a compilation by the North Carolina Bird Records Committee of the species on the Accepted List for North Carolina, through February 1994. The list includes species on the Official List (specimen, photograph, other tangible evidence, or at least three accepted sight records) and species on the Provisional List (one or two accepted sight records, but no tangible documentation). The Records Committee also has three other categories in which a species may be placed: Unaccepted Origin, Unaccepted Sighting, and Unresolved (further Committee action needed). Species in these last three categories are not included in the list below, as they are not on the Accepted List.

The full Accepted List consists of 422 species; 20 of these species are on the Provisional List and are indicated in brackets [Western Grebe], the remaining 402 species are on the Official List. For species seen three or fewer times, the number of accepted records is given. Species for which full details have not yet been published are indicated with a *.

Red-throated Loon
Pacific Loon 1
Common Loon
Pied-billed Grebe
Horned Grebe
Red-necked Grebe
Eared Grebe
[Western Grebe] 1
[Black-browed Albatross] 1
Northern Fulmar
Black-capped Petrel
[Soft-plumaged Petrel] 2
Herald Petrel
[Bulwer's Petrel] 1 *
Cory's Shearwater
Greater Shearwater
Sooty Shearwater
Manx Shearwater
Audubon's Shearwater
Wilson's Storm-Petrel
White-faced Storm-Petrel
Leach's Storm-Petrel
Band-rumped Storm-Petrel
White-tailed Tropicbird
Red-billed Tropicbird
Masked Booby
[Brown Booby] 1 *
Northern Gannet
American White Pelican
Brown Pelican
Great Cormorant
Double-crested Cormorant
Anhinga
Magnificent Frigatebird
American Bittern
Least Bittern
Great Blue Heron
Great Egret
Snowy Egret
Little Blue Heron
Tricolored Heron
Reddish Egret
Cattle Egret
Green Heron
Black-crowned Night-Heron
Yellow-crowned Night-Heron
White Ibis
Glossy Ibis
Roseate Spoonbill
Wood Stork
Fulvous Whistling-Duck
Tundra Swan
Mute Swan
Greater White-fronted Goose
Snow Goose
Ross' Goose
Brant
Canada Goose
Wood Duck
Green-winged Teal

American Black Duck
Mallard
Northern Pintail
[Garganey] 1
Blue-winged Teal
Cinnamon Teal
Northern Shoveler
Gadwall
Eurasian Wigeon
American Wigeon
Canvasback
Redhead
Ring-necked Duck
Greater Scaup
Lesser Scaup
Common Eider
King Eider
Harlequin Duck
Oldsquaw
Black Scoter
Surf Scoter
White-winged Scoter
Common Goldeneye
Bufflehead
Hooded Merganser
Common Merganser
Red-breasted Merganser
Ruddy Duck
Masked Duck 1
Black Vulture
Turkey Vulture
Osprey
American Swallow-tailed Kite
White-tailed Kite 3
Mississippi Kite
Bald Eagle
Northern Harrier
Sharp-shinned Hawk
Cooper's Hawk
Northern Goshawk
Red-shouldered Hawk
Broad-winged Hawk
[Swainson's Hawk] 2
Red-tailed Hawk
Rough-legged Hawk
Golden Eagle
American Kestrel
Merlin
Peregrine Falcon
[Gyrfalcon] 1 *
Ring-necked Pheasant
Ruffed Grouse
Wild Turkey
Northern Bobwhite
Yellow Rail
Black Rail
Clapper Rail
King Rail
Virginia Rail
Sora
Purple Gallinule
Common Moorhen
American Coot
[Limpkin] 2
Sandhill Crane
Northern Lapwing 1
Black-bellied Plover
American Golden-Plover
Wilson's Plover
Semipalmated Plover
Piping Plover
Killdeer
American Oystercatcher
Black-necked Stilt
American Avocet
Greater Yellowlegs
Lesser Yellowlegs
Spotted Redshank 1
Solitary Sandpiper
Willet
Spotted Sandpiper
Upland Sandpiper
Whimbrel
Long-billed Curlew
Black-tailed Godwit 1
Hudsonian Godwit
Bar-tailed Godwit
Marbled Godwit
Ruddy Turnstone
Red Knot
Sanderling
Semipalmated Sandpiper
Western Sandpiper
Little Stint 1
Least Sandpiper
White-rumped Sandpiper
Baird's Sandpiper
Pectoral Sandpiper

Purple Sandpiper
Dunlin
Curlew Sandpiper
Stilt Sandpiper
Buff-breasted Sandpiper
Ruff
Short-billed Dowitcher
Long-billed Dowitcher
Common Snipe
American Woodcock
Wilson's Phalarope
Red-necked Phalarope
Red Phalarope
Pomarine Jaeger
Parasitic Jaeger
Long-tailed Jaeger
Great Skua
South Polar Skua
Laughing Gull
Franklin's Gull
Little Gull
Common Black-headed Gull
Bonaparte's Gull
Mew Gull 3
Ring-billed Gull
California Gull 1 *
Herring Gull
Thayer's Gull
Iceland Gull
Lesser Black-backed Gull
Glaucous Gull
Great Black-backed Gull
Black-legged Kittiwake
Sabine's Gull
Gull-billed Tern
Caspian Tern
Royal Tern
Sandwich Tern
Roseate Tern
Common Tern
Arctic Tern
Forster's Tern
Least Tern
Bridled Tern
Sooty Tern
Black Tern
Brown Noddy
Black Skimmer
Dovekie
Thick-billed Murre
Razorbill
[Black Guillemot] 1 *
Rock Dove
[Band-tailed Pigeon] 1
White-winged Dove
Mourning Dove
Passenger Pigeon—extinct
Common Ground-Dove
Carolina Parakeet—extinct
Black-billed Cuckoo
Yellow-billed Cuckoo
Smooth-billed Ani
Barn Owl
Eastern Screech-Owl
Great Horned Owl
Snowy Owl
Burrowing Owl 2
Barred Owl
Long-eared Owl
Short-eared Owl
Northern Saw-whet Owl
Common Nighthawk
Chuck-will's-widow
Whip-poor-will
Chimney Swift
Green Violet-ear 1 *
Ruby-throated Hummingbird
Rufous Hummingbird
Belted Kingfisher
Red-headed Woodpecker
Red-bellied Woodpecker
Yellow-bellied Sapsucker
Downy Woodpecker
Hairy Woodpecker
Red-cockaded Woodpecker
Northern Flicker
Pileated Woodpecker
Ivory-billed Woodpecker 1—extinct
Olive-sided Flycatcher
Eastern Wood-Pewee
Yellow-bellied Flycatcher
Acadian Flycatcher
Alder Flycatcher
Willow Flycatcher
Least Flycatcher
Eastern Phoebe
Say's Phoebe 3
Vermilion Flycatcher 2

[Ash-throated Flycatcher] 1
Great Crested Flycatcher
Tropical/Couch's Kingbird 1 *
Western Kingbird
Eastern Kingbird
Gray Kingbird
Scissor-tailed Flycatcher
Fork-tailed Flycatcher 1
Horned Lark
Purple Martin
Tree Swallow
Northern Rough-winged Swallow
Bank Swallow
Cliff Swallow
[Cave Swallow] 2 *
Barn Swallow
Blue Jay
American Crow
Fish Crow
Common Raven
Black-capped Chickadee
Carolina Chickadee
Tufted Titmouse
Red-breasted Nuthatch
White-breasted Nuthatch
Brown-headed Nuthatch
Brown Creeper
Carolina Wren
Bewick's Wren
House Wren
Winter Wren
Sedge Wren
Marsh Wren
Golden-crowned Kinglet
Ruby-crowned Kinglet
Blue-gray Gnatcatcher
Northern Wheatear 2
Eastern Bluebird
[Mountain Bluebird] 1
Veery
Gray-cheeked Thrush
Swainson's Thrush
Hermit Thrush
Wood Thrush
American Robin
Gray Catbird
Northern Mockingbird
Sage Thrasher 2
Brown Thrasher
Black-backed Wagtail
(= White Wagtail) 1 *
American Pipit
[Sprague's Pipit] 1
Cedar Waxwing
Northern Shrike 3
Loggerhead Shrike
European Starling
White-eyed Vireo
[Bell's Vireo] 1
Solitary Vireo
Yellow-throated Vireo
Warbling Vireo
Philadelphia Vireo
Red-eyed Vireo
Black-whiskered Vireo 2
Bachman's Warbler 2
Blue-winged Warbler
Golden-winged Warbler
Tennessee Warbler
Orange-crowned Warbler
Nashville Warbler
Northern Parula
Yellow Warbler
Chestnut-sided Warbler
Magnolia Warbler
Cape May Warbler
Black-throated Blue Warbler
Yellow-rumped Warbler
[Black-throated Gray Warbler] 2
Townsend's Warbler 1 *
Black-throated Green Warbler
Blackburnian Warbler
Yellow-throated Warbler
Pine Warbler
[Kirtland's Warbler] 1
Prairie Warbler
Palm Warbler
Bay-breasted Warbler
Blackpoll Warbler
Cerulean Warbler
Black-and-white Warbler
American Redstart
Prothonotary Warbler
Worm-eating Warbler
Swainson's Warbler
Ovenbird
Northern Waterthrush
Louisiana Waterthrush

Kentucky Warbler
Connecticut Warbler
Mourning Warbler
Common Yellowthroat
Hooded Warbler
Wilson's Warbler
Canada Warbler
Yellow-breasted Chat
Summer Tanager
Scarlet Tanager
Western Tanager
Northern Cardinal
Rose-breasted Grosbeak
Black-headed Grosbeak
Blue Grosbeak
Indigo Bunting
Painted Bunting
Dickcissel
Rufous-sided Towhee
Bachman's Sparrow
American Tree Sparrow
Chipping Sparrow
Clay-colored Sparrow
Field Sparrow
Vesper Sparrow
Lark Sparrow
Lark Bunting
Savannah Sparrow
Grasshopper Sparrow
Henslow's Sparrow
Le Conte's Sparrow
Sharp-tailed Sparrow
Seaside Sparrow
Fox Sparrow
Song Sparrow
Lincoln's Sparrow
Swamp Sparrow
White-throated Sparrow
White-crowned Sparrow
Harris' Sparrow
Dark-eyed Junco
Lapland Longspur
Smith's Longspur 3
Chestnut-collared Longspur 1 *
Snow Bunting
Bobolink
Red-winged Blackbird
Eastern Meadowlark
[Western Meadowlark] 2
Yellow-headed Blackbird
Rusty Blackbird
Brewer's Blackbird
Boat-tailed Grackle
Common Grackle
Brown-headed Cowbird
Shiny Cowbird
Orchard Oriole
Northern Oriole
Pine Grosbeak
Purple Finch
House Finch
Red Crossbill
White-winged Crossbill
Common Redpoll
Pine Siskin
[Lesser Goldfinch] 1
American Goldfinch
Evening Grosbeak
House Sparrow

Committee members: Harry E. LeGrand, Jr., Chair
Derb S. Carter, Jr.
Samuel Cooper
Richard J. Davis
John O. Fussell III
Simon R. B. Thompson
Michael H. Tove

# South Carolina Bird List

South Carolina Birds Records Committee

This is a compilation by the South Carolina Bird Records Committee of the species on the Accepted List for North Carolina, through April 13, 1994. The list includes species on the Official List (specimen, photograph, other tangible evidence, or at least three accepted sight records) and species on the Provisional List (one or two accepted sight records, but no tangible documentation). The Records Committee also has three other categories in which a species may be placed; Unaccepted Origin, Unaccepted Sighting, and Unresolved (further Committee action needed). Species in these last three categories are not included in the list below, as they are not on the Accepted List.

The full Accepted List consists of 393 species; 8 of these species are on the Provisional List and are indicated in brackets [Pacific Loon], the remaining 385 species are on the Official List. The Committee request that any sightings of species marked by an * before the species name be documented and submitted for review. Any species not on this list must be documented and submitted to the committee, with a photograph or specimen if possible for review and incorporation into the list. It should be noted that while the * species require documentation anywhere in the state, there are many species that require documentation either seasonally (i.e. most winter warblers in the upstate) or regionally (i.e. gannet on Lake Hartwell) to be accepted for the state records. Reports and other documentation should be submitted the the Chair.

Red-throated Loon
*[Pacific Loon]
Common Loon
Pied-billed Grebe
Horned Grebe
Red-necked Grebe
Eared Grebe
*Western Grebe
Black-capped Petrel
Cory's Shearwater
Greater Shearwater
Sooty Shearwater
*Manx Shearwater
*Little Shearwater
Audubon's Shearwater
Wilson's Storm-Petrel
Leach's Storm-Petrel
*Band-rumped Storm-Petrel
*Whte-tailed Tropicbird
*Masked Booby
*Brown Booby
*Red-footed Booby
Northern Gannet
American White Pelican
Brown Pelican
Great Cormorant
Double-crested Cormorant
Anhinga
Magnificent Frigatebird
American Bittern
Least Bittern
Great Blue Heron
Great Egret
Snowy Egret
Little Blue Heron
Tricolored Heron
Reddish Egret
Cattle Egret
Green Heron
Black-crowned Night-Heron
Yellow-crowned Night-Heron
White Ibis
Glossy Ibis
*Roseate Spoonbill
Wood Stork
Fulvous Whistling-Duck
Tundra Swan
Greater White-fronted Goose

Snow Goose
Brant
Canada Goose
Wood Duck
Green-winged Teal
American Black Duck
Mottled Duck
Mallard
Northern Pintail
Blue-winged Teal
*Cinnamon Teal
Northern Shoveler
Gadwall
*Eurasian Wigeon
American Wigeon
Canvasback
Redhead
Ring-necked Duck
Greater Scaup
Lesser Scaup
Common Eider
*King Eider
Harlequin Duck
Oldsquaw
Black Scoter
Surf Scoter
White-winged Scoter
Common Goldeneye
Bufflehead
Hooded Merganser
Common Merganser
Red-breasted Merganser
Ruddy Duck
Black Vulture
Turkey Vulture
Osprey
American Swallow-tailed Kite
Mississippi Kite
Bald Eagle
Northern Harrier
Sharp-shinned Hawk
Cooper's Hawk
Red-shouldered Hawk
Broad-winged Hawk
*[Swainson's Hawk]
Red-tailed Hawk
*Rough-legged hawk
*Golden Eagle
American Kestrel
Merlin
Peregrine Falcon
Ruffed Grouse
Wild Turkey'
Northern Bobwhite
*Yellow Rail
Black Rail
Clapper Rail
King Rail
Virginia Rail
Sora
Purple Gallinule
Common Moorhen
American Coot
*Limpkin
Sandhill Crane
*Whooping Crane
*[Northern Lapwing]
Black-bellied Plover
American Golden-Plover
*Snowy Plover
Wilson's Plover
Sempalmated Plover
Piping Plover
Killdeer
American Oystercatcher
Black-necked Stilt
American Avocet
Greater Yellowlegs
Lesser Yellowlegs
Solitary Sandpiper
Willet
Spotted Sandpiper
Upland Sandpiper
*Eskimo Curlew
Whimbrel
Long-billed Curlew
*Hudsonian Godwit
Marbled Godwit
Ruddy Turnstone
Red Knot
Sanderling
Semipalmated Sandpiper
Western Sandpiper
Least Sandpiper
White-rumped Sandpiper
*Baird's Sandpiper
Pectoral Sandpiper
Purple Sandpiper

Dunlin
*Curlew Sandpiper
Stilt Sandpiper
Buff-breasted Sandpiper
*Ruff
Short-billed Dowitcher
Long-billed Dowitcher
Common Snipe
American Woodcock
Wilson's Phalarope
Red-necked Phalarope
Red Phalarope
Pomarine Jaeger
Parasitic Jaeger
*Long-tailed Jaeger
Laughing Gull
*Franklin's Gull
*[Little Gull]
*Common Black-headed Gull
Bonaparte's Gull
Ring-billed Gull
Herring Gull
Iceland Gull
Lesser Black-backed Gull
Glaucous Gull
Great Black-backed Gull
*Black-legged Kittiwake
*Sabine's Gull
Gull-billed Tern
Caspian Tern
Royal Tern
Sandwich Tern
Common Tern
*[Arctic Tern]
Forster's Tern
Least Tern
Bridled Tern
Sooty Tern
Black Tern
*Brown Noddy
Black Skimmer
*Dovekie
*Thick-billed Murre
*Razorbill
*Black Guillemot
Rock Dove
*Band-tailed Pigeon
*White-winged Dove
Mourning Dove
Passenger Pigeon—extinct
Common Ground-Dove
Carolina Parakeet—extinct
Black-billed Cuckoo
Yellow-billed Cuckoo
*[Smooth-billed Ani]
*Grooved-billed Ani
Barn Owl
Eastern Screech-Owl
Great Horned Owl
*Snowy Owl
*Burrowing Owl
Barred Owl
*Long-eared Owl
*Short-eared Owl
*Northern Saw-whet Owl
Common Nighthawk
Chuck-will's widow
Whip-poor-will
Chimney Swift
*[Broad-billed Hummingbird]
*[Blue-throated Hummingbird]
Ruby-throated Hummingbird
*Rufous Hummingbird
Belted Kingfisher
Red-headed Woodpecker
Red-bellied Woodpecker
Yellow-bellied Sapsucker
Downy Woodpecker
Hairy Woodpecker
Red-cockaded Woodpecker
Northern Flicker
Pileated Woodpecker
*Ivory-billed Woodpecker—extinct
*Olive-sided Flycatcher
Eastern Wood-Pewee
*Yellow-bellied Flycatcher
Acadian Flycatcher
Willow Flycatcher
Least Flycatcher
Eastern Phoebe
*Say's Phoebe
*Vermilion Flycatcher
*Ash-throated Flycatcher
Great Crested Flycatcher
*Western Kingbird
Eastern Kingbird
*Gray Kingbird
*Scissor-tailed Flycatcher

*Fork-tailed Flycatcher
Horned Lark
Purple Martin
Tree Swallow
Northern Rough-winged Swallow
Bank Swallow
Cliff Swallow
Barn Swallow
Blue Jay
American Crow
Fish Crow
Common Raven
Carolina Chickadee
Tufted Titmouse
Red-breasted Nuthatch
White-breasted Nuthatch
Brown-headed Nuthatch
Brown Creeper
Carolina Wren
*Bewick's Wren
House Wren
Winter Wren
Sedge Wren
Marsh Wren
Golden-crowned Kinglet
Ruby-crowned Kinglet
Blue-gray Gnatcatcher
Eastern Bluebird
Veery
Gray-cheeked Thrush
Swainson's Thrush
Hermit Thrush
Wood Thrush
American Robin
Gray Catbird
Northern Mockingbird
Brown Thrasher
American Pipit
*Sprague's Pipit
Cedar Waxwing
Loggerhead Shrike
European Starling
White-eyed Vireo
*Bell's Vireo
Solitary Vireo
Yellow-throated Vireo
*Warbling Vireo
Philadelphia Vireo
Red-eyed Vireo
*Bachman's Warbler
Blue-winged Warbler
Golden-winged Warbler
Tennessee Warbler
Orange-crowned Warbler
Nashville Warbler
Northern Parula
Yellow Warbler
Chestnut-sided Warbler
Magnolia Warbler
Cape May Warbler
Black-throated Blue Warbler
Yellow-rumped Warbler
*Black-throated Gray Warbler
Black-throated Green Warbler
Blackburnian Warbler
Yellow-throated Warbler
Pine Warbler
*Kirtland's Warbler
Prairie Warbler
Palm Warbler
Bay-breasted Warbler
Blackpoll Warbler
Cerulean Warbler
Black-and-white Warbler
American Redstart
Prothonotary Warbler
Worm-eating Warbler
Swainson's Warbler
Ovenbird
Northern Waterthrush
Louisiana Waterthrush
Kentucky Warbler
*Connecticut Warbler
*Mourning Warbler
Common Yellwothroat
Hooded Warbler
Wilson's Warbler
Canada Warbler
Yellow-breasted Chat
Summer Tanager
Scarlet Tanager
*Western Tanager
Northern Cardinal
Rose-breasted Grosbeak
*Black-headed Grosbeak
Blue Grosbeak
*Lazuli Bunting
Indigo Bunting

Painted Bunting
Dickcissel
*Green-tailed Towhee
Rufous-sided Towhee
Bachman's Sparrow
*American Tree Sparrow
Chipping Sparrow
*Clay-colored Sparrow
Field Sparrow
Vesper Sparrow
*Lark Sparrow
*Lark Bunting
Savannah Sparrow
Grasshopper Sparrow
Henslow's Sparrow
Le Conte's Sparrow
Sharp-tailed Sparrow
Seaside Sparrow
Fox Sparrow
Song Sparrow
Lincoln's Sparrow
Swamp Sparrow
White-throated Sparrow
White-crowned Sparrow
*Harris' Sparrow
Dark-eyed Junco

Lapland Longspur
*Smith's Longspur
*Snow Bunting
Bobolink
Red-winged Blackbird
Eastern Meadowlark
*Western Meadowlark
Yellow-headed Blackbird
Rusty Blackbird
Brewer's Blackbird
Boat-tailed Grackle
Common Grackle
*Shiny Cowbird
Brown-headed Cowbird
Orchard Oriole
Northern Oriole
*Pine Grosbeak
Purple Finch
House Finch
*Red Crossbill
*Common Redpoll
Pine Siskin
American Goldfinch
Evening Grosbeak
House Sparrow

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# General Field Notes

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**NOTICE**

Publication of any unusual sightings of birds in the Field Notes or Briefs for the Files does not imply that these reports have been accepted into the official Checklist of Birds records for either North or South Carolina. Decisions regarding the official Checklists are made by the respective State Records Committees and will be reported upon periodically in THE CHAT.

## Pine Siskin Nest on Roan Mountain, North Carolina

RICHARD L. KNIGHT
804 North Hills Drive
Johnson City, TN 37604

On 13 July 1993 I discovered a nest of the Pine Siskin (*Carduelis pinus*) near the summit of Roan Mountain, Mitchell County, North Carolina. It was found when the incubating female called in response to the male, which was perched in an adjacent tree. The nest was in a live Fraser fir (*Abies fraseri*) within a stand of dead conifers at the entrance to the Rhododendron Gardens Road, only 300 m from the Tennessee border. This is at an elevation of approximately 1875 m. The nest was placed 7.3 m above the ground in a fir about 11 m tall. It was concealed in a clump of foliage near the tip of a branch that extended to the edge of the road. The head and tail of the incubating female could be seen from the road. Attempts to examine the contents of the nest with a mirror mounted on a pole failed because of the dense foliage just above the nest. The nest appeared to be made mainly of grasses.

No siskins were encountered on a visit to the area on 18 June 1993, but one was heard calling as it flew overhead on 3 July. After the discovery of the nest, I saw the male feed the female as she sat upon the nest on 16 July. She was still incubating on 21 July. Wallace Coffey and Larry McDaniel observed an adult feeding at least two noisy young in the nest on 1 August. On 8 August there was no activity around the nest and no siskins were found elsewhere on the mountain. However, I could see considerable excrement around the rim of the nest, as in nests of American Goldfinch (*C. tristis*) from which young have fledged. Two siskins were heard on 29 August near Carver's Gap, about 3 km away.

The Pine Siskin is generally considered to be an erratic visitor or resident in the mountains along the Tennessee and North Carolina border. In a review of breeding evidence in the Southern Appalachians, McNair (1988) cites nine probable or confirmed records, mostly of fledged young, in these two states. Subsequent records are of nests in Transylvania County (Siebenheller and Siebenheller 1992) and Jackson County (Simpson 1993), North Carolina, and fledged young in Hamilton County, Tennessee (Caldwell 1991). The nest described in this note appears to be only the fourth documented nest from this region and just the second verified to contain eggs or young. All are from North Carolina. This was the third breeding record from Roan Mountain (see McNair 1988), which has more such records than any other location in the region (probably owing to more regular coverage). The date of this nesting was later than all previous records cited above, except for one instance of a siskin gathering nest material on 15-16 July 1975 on Roan Mountain (R. Lewis *fide* McNair 1988).

Most siskin breeding records in this region have been in seasons following intermediate or major winter invasions (McNair 1988), again except for the 1975 Roan Mountain record, cited above, which occurred following a "non-existent or poor flight" (*op. cit.*). The 1993 Roan Mountain record followed a poor winter flight, in which only a very few siskins were reported and virtually all of these were at low elevations around feeders. None were found on the 1992 Roan Mountain Christmas Bird Count (pers. obs.).

The relation of Pine Siskin breeding to cone-crop production in the Southern Appalachians is less known than that for Red Crossbills (*Loxia curvirostra*) (McNair 1988). A good cone-crop, particularly of firs, was evident on Roan Mountain during the late summer of 1993. This probably was an important factor in the timing of the nesting, as siskins feed their young by regurgitation of seeds or a mix of seeds and insects (Newton 1972).

Obviously, more intensive study is needed to clarify siskin breeding status in this region. All summer observations noting behavior and cone-crop condition, should be reported.

I thank Eloise Potter and Lynn Moseley for suggestions that improved this note.

## LITERATURE CITED

Caldwell, T. 1991. Possible breeding of Pine Siskins at Lookout Mountain, Tennessee. Migrant 62:3–4.

McNair, D. B. 1988. Review of breeding records of Red Crossbill and Pine Siskin in the Southern Appalachian Mountains and adjacent regions. Migrant 59:105–113.

Newton, I. 1972. Finches. Collins, London.

Siebenheller, N. and W. A. Siebenheller. 1992. Pine Siskins build nest in Transylvania County, N.C. Chat 56:57–59.

Simpson, M. B., Jr. 1993. Pine Siskin nesting in the southern Blue Ridge Mountain province. Chat 57:47–49.

## Tree Swallow Nests in the Coastal Plain of North Carolina

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Tree Swallows (*Tachycineta bicolor*) are common migrants and uncommon winter residents in southeastern North Carolina (Massey and Nance 1989). Although sightings of Tree Swallows during the summer season are not uncommon along North Carolina's coast, evidence of nesting has been reported only in the coastal plain from Currituck and Northampton Counties (Lee 1993, LeGrand 1993). The finding of an occupied nest at Eagle Island in Brunswick County confirms nesting in the southeastern coastal plain of North Carolina and constitutes a noteworthy breeding range extension.

The nest cavity was in a dead snag located in the northwest corner of the flooded north impoundment at Eagle Island. The nest site was approximately 975 m southwest of Redmond Creek and 305 m east of the Brunswick River. The entrance hole was about 4.5 m above the water and there were scattered patches of common reed (*Phragmites australis*) under the snag. Tree Swallows often nest in open habitats near water (Bent 1963, Harrison 1975, Harrison 1984).

A Tree Swallow was first seen near the nest cavity on 21 June 1992. On 28 June 1992 two adults were observed alternating time in the cavity, with the nest left unattended by either adult for no more than 30 seconds. The gray-brown head and white throat of a juvenile bird could be seen peering out from the entrance. A juvenile bird eventually flew from the cavity and perched with an adult. Two juveniles engaged in food-begging behavior with both adults later the same day.

From 6 July 1992 through October 1992, a single white feather could be seen sticking out of the entrance hole. Tree Swallows often line their nests with feathers (Harrison 1975, Harrison 1984) and have a preference for using white feathers (Bent 1963). The presence of 12 Tree Swallows (nine adults and three juveniles) on 6 July 1992 near the stand of snags surrounding the cavity tree suggested that migrant swallows had arrived. Because Tree Swallows are often late spring and early fall migrants, it is not uncommon to find Tree Swallows near the North Carolina coast during the breeding season (LeGrand 1989a, 1990, 1990b, 1992). These migrant birds can make it difficult to distinguish breeding from non-breeding birds.

Tree Swallows are relatively new breeders in North Carolina. The first documented nesting in the state occurred from Ashe County in 1979 (LeGrand and Potter 1980). Since 1979 Tree Swallows have been found nesting at other sites throughout the North Carolina mountains (Duyck 1981, LeGrand 1990, 1990a). Tree Swallows presumably bred in the piedmont at Lake Jordan from 1988 through 1991 (LeGrand 1989, 1991, 1992). In the coastal plain, Tree Swallows have been reported nesting from several locations in Currituck County during 1988–90 (Lee 1993), and presumably bred in Northampton County during 1992 (LeGrand 1993). The presence of an "immature" Tree Swallow reported from Eagle Island on 15 June 1986 suggests that nesting may have occurred in previous years (LeGrand 1987).

The Eagle Island nesting site is over 200 km southeast of the piedmont nesting site at Lake Jordan and over 240 km south of the closest coastal plain nesting site in Northampton County. The breeding range of Tree Swallow has been progressing southward since the 1970s (Lee 1993). This record confirms nesting and extends the

breeding range to southeastern North Carolina. Suitable nesting habitat appears to exist in southeastern North Carolina. Dead trees and bluebird boxes located near flooded areas (i.e. creeks, marshes, reservoirs, impoundments, and beaver ponds) should serve as suitable nesting sites allowing the Tree Swallow to become a more widely established breeder within the state.

## LITERATURE CITED


Bent, A. C. 1963. Life Histories of North American Flycatchers, Larks, Swallows, and Their Allies. U. S. Natl. Mus. Bull. 179. Dover Publ., New York. 555 pp.

Duyck, B. E. 1981. Range expansion of nesting Tree Swallows. The Chat 45(4):98–100.

Harrison, C. 1984. A Field Guide to the Nests, Eggs and Nestlings of North American Birds. Collins Publishers, Ontario, Canada. 416 pp.

Harrison, H. H. 1975. A Field Guide to Birds' Nests. Houghton Mifflin Company, Boston. 257 pp.

Lee, D. S. 1993. Range expansion of the Tree Swallow, *Tachycineta bicolor* (Passeriformes: Hirundinidae), in the Southeastern United States. Brimleyana 18:103–113.

LeGrand, H. E., Jr. 1987. Briefs for the files. The Chat 51(3):78–83.

LeGrand, H. E., Jr. 1989. Southern Atlantic Coast Region. American Birds 43(1):86–89.

LeGrand, H. E., Jr. 1989a. Briefs for the files. The Chat 53(3):71–78.

LeGrand, H. E., Jr. 1990. Briefs for the files. The Chat 54(1):21–30.

LeGrand, H. E., Jr. 1990a. Briefs for the files. The Chat 54(2):42–49.

LeGrand, H. E., Jr. 1990b. Southern Atlantic Coast Region. American Birds 44(1):74–77.

LeGrand, H. E., Jr. 1991. Southern Atlantic Coast Region. American Birds 45(1):88–91.

LeGrand, H. E., Jr. 1992. Briefs for the files. The Chat 56(3):63–70.

LeGrand, H. E., Jr. 1993. Southern Atlantic Coast Region. American Birds 47(1):79–82.

LeGrand, H. E., Jr. and E. F. Potter. 1980. Ashe County breeding bird foray - 1979. The Chat 44(1):5–13.

Massey, A. G. and J. F. Nance. 1989. Birds of Southeastern North Carolina. First edition checklist. Lower Cape Fear Bird Club. 12 pp.

## Least Terns Nesting in Clarendon County, S.C.

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On 27 June 1993, I discovered a Least Tern (*Sterna antillarum*) nesting colony approximately 180 km inland from the Atlantic coast, about 2 km E of Lake Marion, and approximately 3 km S of Rimini in Clarendon Co., SC. I estimated there to be 30 terns including about 10 juveniles present at the colony. I approached the colony on foot, and the adults actively defended by dive-bombing me. None of the juveniles left the ground, but they appeared to be near fledging as they were the same size as the adults and fully feathered. The area consisted of dredged bare soil and several large rain-fed puddles. Least Terns incubate for 3 weeks, and young fledge in about 24 days (Potter et al. 1980); therefore, I estimate the initiation of nesting at this colony occurred in mid-May.

I had earlier observed Least Terns on the property in numbers of no more than 5 on 13 May, 29 May, 1 June, and 25 June. I observed these birds at 2 small impoundments nearby while doing bird scans of these units. I had not seen the area containing the colony since winter, and I assumed that the terns I saw were not breeding. I observed terns successfully fishing in these two impoundments on several occasions. The two impoundments contained largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), pumpkinseed (*Lepomis gibbosus*), grass pickerel (*Esox americanus*), and golden shiner (*Notemigonus crysoleucas*) (J.J. Isely, SC Fish and Wildl. Coop. Res. Unit, unpubl. data).

After I discovered the colony, I also saw Least Terns on the property on 2 and 3 August. At this time the terns were mostly using an impoundment which at the time had large sand bars and shallow water. They rested on the sand bars and foraged in the impoundment, and to a lesser extent, the adjacent impoundment. I did not see any terns where I had originally located the colony. There were no less than 35 birds present on 2 August, including roughly 10 juveniles. The last date I saw any terns on the property was 3 August. I next visited the area on 5 September, so they abandoned the property between 3 August and 5 September.

The colony was using a tract of private land which was mined for clay and is currently being restored into a complex of wetlands to be managed for wildlife. The unit where the terns nested has since been developed into a moist-soil emergent wetland by spreading and contouring soil and planting wetland vegetation. Renesting there seems unlikely.

Least Terns are on the state threatened list in South Carolina (South Carolina Nongame and Heritage Trust Database 1990), and this is the first report of Least Terns nesting in the upper coastal plain in South Carolina since 1967 (Post and Gauthreaux 1989) when Least Terns nested on an unpaved roadbed during the construction of the Interstate 95 bridge over Lake Marion, near Santee in Orangeburg county (Post 1967). This colony was approximately 18 km S of the one near Rimini. The only other reported inland colonies in South Carolina were on a small island on Lake Murray in 1960 and 1961 (Chamberlain 1960, Smith 1961). The Rimini colony is only the fourth ever reported in the upper coastal

plain of South Carolina, the first in 26 years, and the first to report fledged young. The closest Least Tern colonies to Rimini, in recent years, were on the roofs of Amoco Chemicals (1989–1993) and a Technical College (1991–1993), both in central Berkeley County, approximately 65 km SE (South Carolina Colonial Waterbird Database 1993).

Savereno and Murphy (in prep.) propose that an increase in nesting on peagravel roofs and in fewer larger colonies in South Carolina may be a result of a deficiency of suitable nesting habitat. Least Terns nesting inland could be another indicator of a lack of suitable nesting sites along the coast. The Cooper and Santee Rivers provide possible corridors for alternative nesting sites inland.

Acknowledgments: I thank Susan M. Haig, David L. Otis, and Lynette A. Savereno for reviewing this paper and providing sources of information and J. Coker and T. M. Murphy for helpful information.

## LITERATURE CITED

Chamberlain, B. R. 1960. Least terns, inland, and spotted sandpipers, nesting in S.C. Chat 24(4):99–100.

Post, W. and S. A. Gauthreaux. 1989. Status and distribution of South Carolina birds. Contributions from the Charleston Museum No. 18.

Potter, E. F., J. F. Parnell, and R. P. Teulings. 1980. Birds of the Carolinas. The University of North Carolina Press, Chapel Hill.

Savereno, L. A. and T. M. Murphy. In prep. Distribution and status of the least tern in South Carolina.

Smith, E. D. 1961. Least terns again nesting at Lake Murray, S.C. Chat 25(1):89.

South Carolina Colonial Waterbird Database. 1993. Nongame and Heritage Trust Section. South Carolina Wildlife and Marine Resources Department, Rt. 2, Box 607, Green Pond, SC 29446.

South Carolina Nongame and Heritage Trust Database. 1990. South Carolina Wildlife and Marine Resources Department, Columbia, SC.

**CBC Rare Bird Alert**
**(704) 332-BIRD**

## Open Letter to the Membership of the Carolina Bird Club

Department of Biology
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August 15, 1994

Dear Members,

In February 1993, the Executive Board of the Carolina Bird Club voted to establish an annual award to encourage the involvement of young students in the study of birds. This award will be a monetary prize of at least $300 taken from the royalties earned from the sale of *Birds of the Carolinas* by Eloise Potter, James Parnell and Robert Teulings.

The authors' goal in establishing this fund was threefold. First, they wished to use it as a mechanism to thank the many volunteers who had contributed information and photographs that were used in the book. Second, they wanted to recruit more young people into the study of Carolina birds. Finally, as former editors of either *The Chat* or the column *Briefs for the Files*, they were trying to solicit more submissions of manuscripts for publication in *The Chat*. As the present editor of *The Chat*, I heartily applaud this last goal.

My purpose in writing to you at this time is to make you aware of the existence of this award and to encourage you to make this information available to your students. I have enclosed a copy of the administrative proceedures for implementing the program to use as guidelines in making nominations.

The Chair of the Award Committee for this year is:

Mr. Peter Worthington
716 Almond Drive
Simpsonville, SC 29681

Sincerely,

H. T. Hendrickson, Editor
*The Chat*

## Administration of CBC Scholarship Committee

1. The President of CBC should appoint a Scholarship Committee under the provisions of Article XI, Subarticle II (section on General Committees). Appointments should be made by 1 July.

2. This committee shall be composed of four members of the Carolina Bird Club (one Vice President who shall serve as Chair, the Editor of *The Chat,* the editor emeritus of *The Chat* and one other person).

3. This committee will report directly to the Executive Board and have no authority to spend money without approval of the Executive Board.

4. The Scholarship Committee shall send out annually (by 1 September) a call/notice asking for nominees for the scholarship. This call/notice should be sent to all professional ornithologists in the Carolinas. These people will be primarily from college and university biology departments but may also include others who might have contact with students of bird biology, such as museum curators, non-game species personnel with the state wildlife agencies or key contacts within the state departments of Public Instruction. This same call/notice shall be sent to the general membership of the Carolina Bird Club by means of the *CBC Newsletter* and *The Chat.*

5. The Scholarship Committee shall keep all potential nominators informed about the guidelines for selection of scholarship recipients (see points 8, 9 and 10 below) and amounts of funds available.

6. The Scholarship Committee shall submit to the Executive Committee a report of nominations received and recommendations for scholarship awards by the annual Winter Meeting.

7. The Scholarship Committee shall submit to the Editors of *The Chat* and the *CBC Newsletter* information about the Scholarship Committee's work for publication after action has been taken by the Executive Board at the annual Winter Meeting.

8. As the purpose of the scholarship is to encourage ornithological studies by young people, the nominees must have been registered students at some recognized "school" at the time that the "work" was done. Student status can be established by recommendation by a recognized (recognizable) faculty advisor.

9. The "work" may be any publishable information about any aspect of birds in the Carolinas. There must be a document (paper, manuscript) that can be published in *The Chat* or some other ornithological journal. (Our intent here is to reward work that has been done, not work that is planned or will be done.)

10. All nominations for scholarship awards must be submitted in quadruplicate to the Chair of the Scholarship Committee by 1 December.

11. Presentation of the Scholarship Awards shall be made at the annual Spring Meeting.

## BRIEFS FOR THE FILES

RICKY DAVIS

(All dates Fall 1993)

RED-THROATED LOON: An individual was at Jordan Lake, NC from 13 to 21 November (Steve Dinsmore, Susan Grove, Ricky Davis) for the only inland report.

COMMON LOON: A first-year bird at Lake Townsend, NC from 8 to 29 August (Herb Hendrickson, Henry Link) was an absurdly early migrant!

RED-NECKED GREBE: The only report was of one at Huntington Beach State Park, SC on 23 November (Jack Peachey).

EARED GREBE: This species continues to be found in the Carolinas with birds present at the usual spots in Goldsboro (for seven consecutive years!) and along the Outer Banks of North Carolina. Birds were also at L. Wheeler near Raleigh from 25 November on into winter (Todd Hass, Roger McNeill, and others) and at Sumter, SC on 26 November (Lex Glover, Bert Fisher).

WESTERN GREBE: An individual of this species was found on the big pond at Cape Hatteras point on 8 November by Paul Lehman, Shawneen Finnegan, and Ken Hollinga. The bird remained here on into December and was seen by many observers. This was probably the best documented occurrence in the Carolinas, especially since the Western/Clark's Grebe split.

HORNED GREBE: A locally high count was the 47 found at Jordan L., NC in November by Steve Dinsmore and Susan Grove.

HERALD PETREL: This species is being found more frequently the past several years and this fall there were four reports off the Outer Banks of North Carolina. One intermediate phase was found on 2 August by Allan Foreman, fide Ned Brinkley; and three single dark phase birds on 7 and 16 August and 26 September (A. Hill party, and M. Tove party).

CORY'S SHEARWATER: This species is one of the most common pelagic birds off our coasts in summer and fall, but the count of 2,452 off Oregon Inlet 22 August (M. Tove party) was exceptional.

GREATER SHEARWATER: The best numbers in recent memory were offshore this fall with a high count of 240 off Oregon Inlet on 22 August (M. Tove party).

SOOTY SHEARWATER: Sooties in late summer and fall are quite rare in Carolina offshore waters, thus up to two off Oregon Inlet in early August (A. Hill party) were good finds. Observers should be careful with all dark shearwaters at this time of year due to the presence of dark Herald Petrels which are becoming more expected.

WILSON'S STORM-PETREL: This species often turns up in coastal waters, but the bird in western Pamlico Sound near Swan Quarter 28 November (Eric Dean) was not only "almost inland" but also late!

BAND-RUMPED STORM-PETREL: The best counts off Oregon Inlet this fall were 18 on 21 August (M. Tove party) and 37 on 14 August (A. Hill party).

WHITE-FACED STORM-PETREL: Always exciting, one was photographed off the Outer Banks on 27 August (Odear party) as it gave good views to observers.

WHITE-TAILED TROPICBIRD: This species is regular but uncommon offshore each year, thus reports are always big news. Singles were found off Charleston, SC on 1 August (Todd Hass, Joe Poston); off Oregon Inlet, NC on 16 August (A. Hill party); and off Hatteras, NC on 19 August (Steve Dinsmore).

MASKED BOOBY This species is a rare bird in North Carolina waters, but is being found practically yearly. One was off Oregon Inlet on 21 August (M. Tove party) and another was off Hatteras on 18 September (Brian Patteson, et al.).

GREAT CORMORANT: An immature was early near Ocracoke, NC on 28 August (Steve Dinsmore, et al.). Also one was unusual away from the beaches near Washington, NC on the Pamlico River on 19 November (Harry LeGrand, John and Paula Wright).

WHITE PELICAN: The third! record for Jordan Lake near Chapel Hill, NC was of an individual from 3 to 14 November (Jim Keighton and many others). The presence of four near Morehead City, NC on 19 October (Henry Tunstall, fide John Fussell) was a locally unusual record.

LEAST BITTERN: One seen at Bear I., SC on 12 November (Simon Thompson) was rather late.

REDDISH EGRET: The last several years, this species has increased as a post-breeding wanderer in the Carolinas. This fall there were birds at Huntington Beach State Park, SC in August and September (Jack Peachey, Mary McDavit, and many others); Sunset Beach, NC in August (Russ Tyndall, John Fussell, and many others); Yawkey Wildlife Center, Georgetown County, SC in August (Lex Glover, Nell Moore, Amy Armstrong); Cape Hatteras point 26 August (Steve Dinsmore, Tim Schrantz); and several on Core Banks in August and September (Steve Dinsmore).

BLACK-CROWNED NIGHT-HERN: An immature was noted at Jordan Lake near Chapel Hill, NC on 19 September by Jeff Pippen for the only inland report.

YELLOW-CROWNED NIGHT-HERON: Always a good find inland, an immature was noted near Goldsboro, NC on 24 August by Eric Dean.

WHITE IBIS: There were better than average numbers of inland wanderers this fall as evidenced by the presence of 51 at two lakes in the Wilson, NC area 29 August (Ricky Davis). Also of note were four at L. Townsend near Greensboro, NC from 8 August to 18 September (Herb Hendrickson) and two in the Cashiers Valley area of Transylvania County, NC from mid-August to 27 September as seen by the Siebenhellers.

GLOSSY IBIS: This species seems to be declining in the Carolinas the last several years, thus a count of 80 at the Savannah National Wildlife Refuge, SC on 6 November (Anne Waters) was encouraging.

WOOD STORK: Good counts for this closely monitored species were the 51+ at the Silver Bluff Audubon Sanctuary, Jackson, SC on 14 August (Anne Waters) and 26 at Sunset Beach, NC on 18 August (Mary McDavit).

FULVOUS WHISTLING-DUCK: The Outer Banks of North Carolina had an influx of birds this fall with a flock of 11 at C. Hatteras point on 21 October (Steve Dinsmore, Marcia Lyons, Suzanne Wrenn), two at North Pond, Pea I. on 22 October (Steve Dinsmore), and five at Ocracoke on 3 November (J.M.Sanderson). From one to two of the C. Hatteras birds remained on into the winter.

MUTE SWAN: An adult was at Clam Shoal in Pamlico Sound, NC from 8 August to at least 2 October as noted by Steve Dinsmore and Susan Grove.

GREATER WHITE-FRONTED GOOSE: One made a very rare appearance at L. Johnson, Raleigh, NC from 21 to 27 November (Vernon Janke, many others).

SNOW GOOSE: This species pushed south in better than average numbers as evidenced by the 20 at Ft. Fisher, NC on 20 November (Ralph Widrig). Also 6 at the Yawkey Wildlife Center, Georgetown County, SC on 25 October (Lex Glover) and an immature at Bear I., SC on 11 November (Simon Thompson) were good records for that state.

EURASIAN WIGEON: The peak count for this species at the usual North Pond, Pea I., NC spot was five on 22 October (Steve Dinsmore).

REDHEAD: A locally uncommon report was of a male at L. Townsend near Greensboro, NC on 28 November (Herb Hendrickson, Henry Link).

RING-NECKED DUCK: An individual of this species found at Santee National Wildlife Refuge, SC on 6 September (Bob Wood) was either a very early migrant or a summering bird.

COMMON EIDER: A female was a little early at Cape Hatteras point on 31 October and another or the same bird was at Pea I. on 8 November (J.M.Sanderson).

OLDSQUAW: Two at L. Brandt near Greensboro, NC on 25 November (Henry Link, fide Herb Hendrickson) were locally unusual.

BLACK SCOTER: Inland birds were two at L. Brandt, Greensboro, NC on 8 November (Henry Link, fide Herb Hendrickson) and up to three at Jordan Lake, Chapel Hill, NC on 20 and 21 November (Steve Dinsmore, Susan Grove, Ricky Davis).

SURF SCOTER: Inland Surfs in North Carolina were one at Goldsboro on 13 October (Eric Dean), two in the Greensboro area on 25 November (Henry Link, fide Herb Hendrickson), and two farther west in Henderson County on L. Osceola on 26 and 27 November (Wayne Forsythe, Simon Thompson).

WHITE-WINGED SCOTER: The Greensboro, NC area made a clean sweep of scoters this fall including two White-wingeds at L. Brandt on 27 October (Henry Link, fide Herb Hendrickson).

HOODED MERGANSER: A pair spent the summer on into August at Little River, SC at a golf course pond but no evidence of breeding was observed (Bill and Mary McDavit).

COMMON MERGANSER: The only fall report was of one at Jordan Lake near Chapel Hill, NC on 6 September (Ken Lundstrom). This early date probably makes this the individual that has been seen off and on the last several years at that locality.

RED-BREASTED MERGANSER: The flock of 55! found at Dupont Lake, Transylvania County, NC on 19 November (Tom Joyce, fide Norma Siebenheller) was not only large but also provided just the third county record.

RUDDY DUCK: A rare breeding record was provided by a pair with five young at Ocean Isle, NC from early August through September (Mary McDavit). Another pair spent the summer at Topsail Beach, NC but breeding was not noted (Jimi and Nell Moore).

MISSISSIPPI KITE: Two sub-adults seen at Caesar's Head State Park, SC on 18 August (Don Serif, Irvin Pitts) were not only rare for up-state South Carolina but were first records for the park.

SHARP-SHINNED HAWK: The peak one-day count this fall came from Cape Hatteras Campground, NC when Steve Dinsmore tallied 106 on 19 October.

COOPER'S HAWK: On 19 October Dinsmore had a good count of 12 from the Cape Hatteras Campground. The one-day total of 7 near Charleston, SC on 26 September (Robin Carter, Caroline Eastman, Dennis and Donna Forsythe) was that state's best count this season.

BROAD-WINGED HAWK: This species staged a good migration at certain sites this fall. In North Carolina, the peak count was from Pilot Mt. State Park on 22 September when 10,835 were seen (Toby Gordon). In South Carolina, the peak was 2,015 on 23 September at Caesar's Head State Park (Don Serif, et al.). Coastal migrants were highlighted by the 10 near Charleston, SC on 1 October (Lex Glover, et al.). And finally, a "dark morph" Broad-wing was seen well near Chapel Hill, NC on 18 October (Joe Poston, Julia Shields) for one of the very few records of this phase in the eastern part of the country!

SWAINSON'S HAWK: An immature was found at Pea I., NC on 3 October by Eric Dean. Luckily he ran into Steve Dinsmore who was able to relocate and photograph the bird. This provided the best documentation for this species in the state. Several previous reports were unverified sight records only.

GOLDEN EAGLE: There were reports of one or two in the Transylvania County, NC area from late October through November (Bill and Norma Siebenheller). Also an adult was found at the Yawkey Wildlife Center, Georgetown County, SC on 16 November (Lex Glover, John Cely) for the only report from that state.

MERLIN: The peak coastal count was 14 at Cape Hatteras Campground, NC on 19 October (Steve Dinsmore). In North Carolina, inland birds were found near Goldsboro, Durham, Washington, and New Bern.

PEREGRINE FALCON: The peak one-day total was 14 at Charleston, SC on 26 September (Robin Carter, Caroline Eastman, Donna and Dennis Forsythe). Inland migrants turned up at Chapel Hill, Durham, Jamesville, and Pilot Mt. State Park in North Carolina and at Jackson in South Carolina. The "resident" pair at Chimney Rock, NC was seen as late as 20 November (Simon Thompson).

CLAPPER RAIL: One found dead near Goldsboro on 23 August (Eric Dean) was the only inland report.

KING RAIL: A window-kill in Columbus, Polk County, NC on 6 September (Simon Thompson) provided the first record for that county.

COMMON MOORHEN: An immature bird was found on L. Osceola near Hendersonville, NC on 16 October (Wayne Forsythe, Simon Thompson) for a rare local record.

BLACK-BELLIED PLOVER: In South Carolina, inland migrants were found at the Orangeburg Sod Farm (Anne Waters) and the Bucksport Sod Farm, Horry County (Tonya Spires, fide Jack Peachey). In North Carolina, birds were at Goldsboro (Eric Dean), Jordan Lake (Doug Shadwick), and Falls Lake (many observers). The peak at Falls was 16 on 10 October (Ricky Davis).

LESSER GOLDEN PLOVER: This species was widely reported from the Carolinas this fall. In South Carolina, singles were observed at Huntington Beach State Park on 22 August (Nathan Dias, et al.), Socastee in late August and 8 November (Rick Murray), and Bucksport Sod Farm (Tonya Spires). A peak of four were at the Orangeburg Sod Farm on 11 September (Charleston

Nat. His. Soc.). In North Carolina, individuals were found at South Pond, Pea I. on 15 August (A. Hill party), North Pond, Pea I. on 4 October (Steve Dinsmore. Susan Grove), Cape Hatteras Campground on 30 October (J.M.Sanderson), Goldsboro from 9 September to 15 October (Eric Dean), and at Falls Lake from 4 September to 10 October (Steve Dinsmore, Ricky Davis). The peak at Falls was 11 on 12 September (Ricky Davis).

WILSON'S PLOVER: A very good count for this species was the 82 tallied at Portsmouth on 22 August by Dinsmore.

SEMIPALMATED PLOVER: The only inland South Carolina report was of one at the Orangeburg Sod Farm on 29 August (Robin Carter, Caroline Eastman). In North Carolina, Falls Lake had good totals with the peak being 40 on 12 September (Ricky Davis). Also noteworthy was the 10 at Buckhorn Reservoir near Wilson on 29 August (Ricky Davis) for one of the few Wilson County records.

PIPING PLOVER: Dinsmore had excellent counts on Core Banks on 20 August. He found 26 at New Drum Inlet and an amazing 110 at Portsmouth! These are encouraging tallies for this closely monitored species.

AMERICAN AVOCET: The count of 110 at the usual Savannah River Spoil Site locality on 2 October (Anne Waters) was a good total. Individuals were also found at some less usual sites such as Cape Hatteras point on 19 August (Steve Dinsmore), near Beaufort, NC on 12 October (John Fussell), Topsail Beach on 6 September (Jimi and Nell Moore), and inland at Falls Lake on 11 September (Les Todd).

WILLET: A rare inland bird was one at Buckhorn Reservoir near Wilson on 29 August (Ricky Davis) for a first county record.

UPLAND SANDPIPER: The peak at the Orangeburg Sod Farm was 15 on 22 August (Lex Glover, Pete Worthington, Nell Moore). The Cherry Hospital grounds near Goldsboro, NC also had a good total of 16 on 28 August (Eric Dean). The three near Topsail Beach on 31 August (Jimi and Nell Moore) provided a good local count.

LONG-BILLED CURLEW: The best total this fall was of five near Cape Romain National Wildlife Refuge on 26 September (J. Cox). Birds were again seen at the usual spots such as Ft. Fisher and Portsmouth (Ralph Widrig, Steve Dinsmore). The presence of two at the east end of Shackleford Banks near Morehead City on 15 August (John Fussell, Marta Pearson) was less expected.

HUDSONIAN GODWIT: The only report concerning this species was of at least three at North Pond, Pea I., NC from late September to mid-October (many observers).

RUDDY TURNSTONE: Inland migrants were found in North Carolina at Jordan Lake on 25 September (Doug Shadwick), Goldsboro on 8 September (Eric Dean), and Falls Lake with the peak being 4 on 1 September (Ricky Davis). In South Carolina, inland migrants are more rare than in North Carolina, thus one at the Orangeburg Sod Farm on 6 September (Bob Wood) was a good find.

RED KNOT: Always rare inland in the Carolinas, this species was found three times at Falls Lake. Different adults were present on 22 August (Ricky Davis), 4 September (Steve Dinsmore), and 12 September (Ricky Davis).

SANDERLING: The best inland migrant totals were 7 on 18 September at Goldsboro (Eric Dean), 25 at Falls Lake on 6 September (Bert Fisher), and then 50 at Falls on 12 September (Ricky Davis). An albino Sanderling

observed near Avon, NC in October (Steve Dinsmore, et al.) must have been a surprise!

SEMIPALMATED SANDPIPER: The only report from inland South Carolina was of 5 at the Orangeburg Sod Farm on 29 August (Robin Carter, Caroline Eastman). In North Carolina, the peak at Falls Lake was 55 on 22 August (Ricky Davis). Also Buckhorn Reservoir near Wilson had a good count of 50 on 29 August (Ricky Davis).

WESTERN SANDPIPER: The only inland reports came from North Carolina where one was at Jordan Lake on 28 August (Chapel Hill Bird Club), 5 were at Falls Lake on 22 August (Ricky Davis), and two were first county records at Buckhorn Reservoir near Wilson on 29 August (Ricky Davis).

WHITE-RUMPED SANDPIPER: In North Carolina, inland birds were one at Falls Lake on 6 September (Bert Fisher) and 4 at Goldsboro on 24 September (Eric Dean). Late coastal migrants were at Cape Hatteras Campground on 13 November (Bob Holmes, Larry Crawford, Wade Fuller) and Kure Beach on 11 November (Nell Moore).

BAIRD'S SANDPIPER: Inland migrants were found at Goldsboro on 6 August (Eric Dean), L. Wilson, near Wilson on 29 August (Ricky Davis) for a first county record, and at Falls Lake from 22 August to 12 September (Harry LeGrand, Ricky Davis). On the Outer Banks, singles were at South Pond, Pea I. on 18 August and 4 October (Steve Dinsmore), and at Cape Hatteras Campground on 17 September (Dinsmore) and the late date of 13 November (Bob Holmes, et al.). Also a juvenile bird frequented the "beach"! near Avon from 12 October until 10 November (Dinsmore, J.M.Sanderson, Pat Moore) for an unusual occurrence.

PECTORAL SANDPIPER: A count of 250 at the Orangeburg Sod Farm on 29 August (Robin Carter, Caroline Eastman) was impressive. Also a late individual was at Bear I., SC on 12 November as noted by Simon Thompson.

PURPLE SANDPIPER: One at the Cape Hatteras Lighthouse jetty was slightly early on 25 October (Steve Dinsmore).

CURLEW SANDPIPER: The Outer Banks had the only reports this fall with from one to two at South Pond, Pea I. on 24 August, one juvenile at Cape Hatteras point on 24 October, and one adult at Portsmouth on 21 August (Steve Dinsmore).

STILT SANDPIPER: Reports of this species were widespread in North Carolina this fall. The best total came from South Pond, Pea I. where Dinsmore counted 120 on 24 August. Inland birds were at Jordan Lake (Doug Shadwick), L. Jeanette in Guilford County (Herb Hendrickson, Henry Link), Buckhorn Reservoir near Wilson (Ricky Davis), Falls Lake (Ricky Davis), and Goldsboro with a peak of 25 in late September (Eric Dean).

BUFF-BREASTED SANDPIPER: This species is erratic in its numbers from year to year, but this fall reports were widespread. There were from 2 to 6 birds in September at the Orangeburg Sod Farm (Charleston Nat. His. Mus., Bob Wood, Robin Carter, Caroline Eastman, Anne Waters); 1 to 3 birds at the Bucksport Sod Farm in Horry County in early September (Tonya Spires, Jack Peachey); 4 at Socastee, SC during August and September (Rick Murray); 3 to 4 at the Cherry Hospital grounds near Goldsboro, NC in early September (Eric Dean); up to 6 at Falls Lake in early September (Harry LeGrand, Steve Dinsmore, Ricky Davis); one at L. Jeanette in Guilford County in mid-

September (Henry Link, Herb Hendrickson); one at Buckhorn Reservoir near Wilson on 29 August (Ricky Davis); 1 to 5 at Cape Hatteras point mid-August to mid-September (Carolina Bird Club, Steve Dinsmore); and 2 at South Pond, Pea I. on 21 August (Eric Dean).

RUFF: The only report for the fall was of a female at South Pond, Pea I. on 30 August as noted by Steve Dinsmore.

SHORT-BILLED DOWITCHER: Inland migrants included 4 at Jordan Lake on 28 August (Chapel Hill Bird Club), 4 at Goldsboro in early September (Eric Dean), 8 at Buckhorn Reservoir near Wilson on 29 August (Ricky Davis), a peak of 30 at Falls Lake on 1 September (Ricky Davis), and one at the Orangeburg Sod Farm on 29 August (Robin Carter, Caroline Eastman).

LONG-BILLED DOWITCHER: The only inland report was of a bird seen and heard at Falls Lake on 1 September (Ricky Davis).

AMERICAN WOODCOCK: A rare coastal summer report was of one at Cherry Point, NC on 6 August as noted by John Fussell.

RED-NECKED PHALAROPE: An individual at the Goldsboro, NC Wastewater Treatment Plant on 13 September was the only inland report this fall (Eric Dean).

WILSON'S PHALAROPE: In South Carolina one was at Huntington Beach State Park on 22 August (Nathan Dias, et al.) and a good tally of 15! was at the Savannah River Spoil Site on 11 September (Anne Waters). In North Carolina, reports were widespread with 3 at Cape Hatteras point on 6 August (Steve Dinsmore, Susan Grove), up to 7 at South Pond, Pea I. from 21 August to 6 October (Eric Dean, Steve Dinsmore), 2 at Goldsboro on 6 August (Eric Dean), and one at Falls Lake in early September (Steve Dinsmore, Ricky Davis).

LONG-TAILED JAEGER: North Carolina had the only reports with singles on 16 August (A. Hill party) and 20 August (Ned Brinkley), and 3 on 5 September (Brian Patteson party); all off of Oregon Inlet.

SOUTH POLAR SKUA: This species was found on three August trips in North Carolina waters. One was off Oregon Inlet on the 14th (A. Hill party), two off Oregon Inlet on the 21st (M. Tove party), and one off Hatteras on the 19th (Steve Dinsmore).

LAUGHIHG GULL: Near Raleigh, NC an adult was at Falls Lake on 19 November (Steve Dinsmore, Susan Grove), and at the city landfill a first-winter bird was present on 16 November as noted by Hader.

LESSER BLACK-BACKED GULL: Summering birds were two at Clam Shoal in Pamlico Sound in August (Dinsmore). Possibly an early wintering bird was one at Bird Shoal near Beaufort, NC on 12 October (John Fussell).

BLACK-LEGGED KITTIWAKE: The only report for the fall was of a first-winter bird at Huntington Beach State Park, SC on 7 November as noted by Lex Glover, Bert Fisher, and Roger McNeill.

SABINE'S GULL: North Carolina had the only reports with an adult off Oregon Inlet on 5 September and a juvenile off Oregon Inlet on 18 September (Brian Patteson party). A rare onshore report was of an immature at Cape Hatteras point on 8 October (Diane Andre, et al.).

CASPIAN TERN: A peak count of 17 at L. Townsend near Greensboro, NC on 5 September (Herb Hendrickson) was a noteworthy Guilford County total.

ROSEATE TERN: As usual, there were from one to two present at the tern colony at Cape Hatteras point during August and a third bird was found to the north at Pea I. on 18 August (Steve Dinsmore, Susan Grove).

ARCTIC TERN: A rare August report was of one adult off of Hatteras on the 15th as noted by Steve Dinsmore.

SOOTY TERN: From one to three remained at the tern colony at Cape Hatteras point up until 18 August (Steve Dinsmore). Two were found off Charleston on 25 September (Nathan Dias, et al.) for the only South Carolina report. Several days after the passage of Hurricane Emily, good numbers of Sooties were off of Oregon Inlet. There were 88 on 4 September and 59 on 5 September (Brian Patteson party).

BLACK TERN: There were some good coastal counts this fall with 411 at New Drum Inlet, NC on 20 August (Dinsmore) and 200 at Bear I., SC on 29 August (Nathan Dias, F. Smith) being the best reports. There were the usual scattered inland reports with 5 at Jordan Lake on 3 August (Michael Morgante, fide Will Cook), one at L. Crabtree near Raleigh on 7 September (Doug Shadwick), and two at L. Townsend near Greensboro on 3 September (Henry Link, fide Herb Hendrickson). A very late individual was at Bear I. on 12 November as noted by Simon Thompson.

WHITE-WINGED DOVE: An individual of this species was seen at Buxton, NC on 10 November (Ricky Davis) and probably the same bird was later found just to the north at Avon on 13 November (John and Paula Wright, Derb Carter).

COMMON GROUND-DOVE: This species continues to decline in the Carolinas thus a count of 20+ at the Savannah River Spoil site on 4 September (Calvin Zippler, fide Anne Waters) is encouraging. Five were seen at Edisto Beach on 16 October (Robin Carter, Caroline Eastman) and one was shot by a hunter in Lexington County on 20 November (fide John Cely) for the only other reports received.

BLACK-BILLED CUCKOO: The only reports were of singles at Pea I. on 14 August and nearby Bodie I. on 13 August (Len and Esther Pardue, Pat Coin, Don Perry, et al.), one adult near Durham on 22 August (Len Pardue, Bert Fisher, Les Todd), one at Pea I. on 4 October (Steve Dinsmore, Susan Grove), and one in the mountains at Haywood Gap on the Blue Ridge Parkway on 3 October (Russ Tyndall, Patricia Earnhardt).

OLIVE-SIDED FLYCATCHER: This species was found in the Congaree Swamp National Monument twice; on 11 September (Charleston Nat. His. Mus) and 3 October (Robin Carter, Caroline Eastman). Also one was found at Carver's Gap, Roan Mountain, NC on 29 August as noted by Rick Knight.

YELLOW-BELLIED FLYCATCHER: Migrants were noted near Charleston, SC on 19 September (Dennis Forsythe), in Greenwood County, SC on 9 September (Steve Patterson), and one was early in the Green Swamp, Brunswick County, NC on 12 August (Rick Murray). Also one was found offshore of Cape Hatteras, NC on 12 September (M. Tove party) for a rare report.

LEAST FLYCATCHER: There were only two reports this fall; one heard calling in Simpsonville, SC on 1 October (Pete Worthington) and a silent bird in Richland County, SC on 2 October (Robin Carter, Caroline Eastman).

WESTERN KINGBIRD: As usual, all records were coastal, with singles at Charleston on 30 September (Dennis Forsythe), at Cape Hatteras Campground

on 19 October (Steve Dinsmore and many others), at Avon on 24 October (Dinsmore), at Ft. Fisher on 29 October (Nell Moore), and at Rodanthe on 13 November (Dinsmore).

GRAY KINGBIRD: This rare species was at Moore's Landing, SC in early October (Dennis Forsythe, et al., Robin Carter, Caroline Eastman) and at Buxton, NC on 20 and 21 October (Steve Dinsmore, M. Sanderson, many others).

SCISSOR-TAILED FLYCATCHER: Always exciting in the Carolinas, one was found at Cape Hatteras Campground on 19 October (Dinsmore and many others).

BANK SWALLOW: An exceptional count of 300+ was tallied at the Orangeburg Sod Farm on 5 September by Simon Thompson.

COMMON RAVEN: This species has been slowly increasing in North Carolina the last couple of years and the appearance of from one to two in downtown Winston-Salem throughout the fall is indicative of this increase (Ramona Snavely).

RED-BREASTED NUTHATCH: This fall saw one of the better movements of this species in recent memory. They were seen frequently from the coast to the mountains with the best count being 63 on 11 November at Roan Mountain, NC (Rick Knight).

SEDGE WREN: Two birds at Glen Cannon, Transylvania County, NC on 28 September (Bill and Norma Siebenheller) provided a first county record!

SWAINSON'S THRUSH: This species came through in decent numbers with some of the better counts being 5 at Tryon, NC on 7 October (Simon Thompson) and a total of 49 banded at York, SC during the fall (Bill Hilton, Jr.).

GRAY-CHEEKED THRUSH: In York, SC Hilton banded 14 during the season which was a record seasonal total for him. Also one was found at Chapel Hill, NC on 10 October (Bert Fisher) and one was at Manteo, NC on 2 October (Eric Dean).

WARBLING VIREO: Six were found singing near Sparta along the New River on the rather late date of 5 September (Roger McNeill).

PHILADELPHIA VIREO: Reports were as follows; one at Carolina Beach State Park on 11 September (Sam Cooper), one at N. Augusta, Aiken County, SC on 12 September (Robin Carter, Caroline Eastman), one at Falls Lake on 12 September (Ricky Davis), one at Roanoke I. on 24 September (Ricky Davis), one at Pea I. on 28 September (Steve Dinsmore, M. Sanderson), one at Ft. Fisher on 28 September (Sam Cooper, Kevin Markham), two in Guilford County on 2 October (Herb Hendrickson, Henry Link), and one on Unaka Mountain on 12 October (Rick Knight).

GOLDEN-WINGED WARBLER: This species seems to be declining as a breeder in North Carolina, but holding its own as a fall migrant! Single migrants were noted in Chapel Hill on 16 August (Will Cook, Julia Shields) and 16 September (Bert Fisher). One was at Greensboro on 11 September (Herb Hendrickson), one was at Greenville on 12 September (Russ Tyndall), and one was at Richlands on 12 September (Jimi and Nell Moore). In South Carolina one was found near Charleston on 25 September (Dennis Forsythe) and two were banded by Hilton at York during the fall.

BLUE-WINGED WARBLER: Blue-wingeds were reported very little with the best record being a late individual at Charleston, SC on 16 October (Robin Carter, Caroline Eastman).

"BREWSTER'S" WARBLER: This hybrid was found once; a bird was at Wampee, Horry County, SC on 12 September (Rick Murray).

NASHVILLE WARBLER: This uncommon species was reported only from North Carolina with singles at Chapel Hill on 10 September (Len Pardue), at Durham on 11 September (Len Pardue, Will Cook, Julia Shields), at Pea I. on 11 September (Steve and Jim Dinsmore, Susan Grove), at Corolla on 25 September (Roger McNeill), and a late individual at Ft. Fisher on 28 November (Ralph Widrig).

CAPE MAY WARBLER: There were two reports of late migrants with one at Pea I., NC on 2 November (Ricky Davis) and one at Santee, SC on 12 November (Rick Murray).

BLACK-THROATED BLUE WARBLER: Two were late migrants at Pea I., NC on 2 November as noted by Ricky Davis.

PRAIRIE WARBLER: A slightly late migrant was at L. Mattamuskeet, NC on 21 November (CBC party).

AMERICAN REDSTART: A bird at Huntington Beach State Park, SC on 7 November (Lex Glover, Bert Fisher, Roger McNeill) was slightly late.

CONNECTICUT WARBLER: This species was reported very little this fall with North Carolina only getting birds. Single individuals were found near L. Townsend, Greensboro on 21 September (Henry Link, Herb Hendrickson, Dennis Burnette), at Ft. Fisher on 30 September (Sam Cooper), and in Greenville on 21 October (Ken Harrell, fide John and Paula Wright).

WILSON'S WARBLER: One at Brookgreen Gardens on 24 October (Jimi and Nell Moore) was the only South Carolina report. In North Carolina individuals were at Blowing Rock on 5 September (Scott Hartley), Falls Lake on 12 September (Ricky Davis), Pea I. on 22 September (Lex Glover), Roanoke I. on 24 September (Ricky Davis), at Tryon on 23 September (Simon Thompson), at Corolla on 26 September (Len Pardue), and at Pea I. on 4 October (Steve Dinsmore, Susan Grove).

YELLOW-BREASTED CHAT: One was observed off of Charleston, SC on 21 August by a CBC pelagic trip.

WESTERN TANAGER: A female coming to a feeder in Columbia, SC on 18 October (Caroline Eastman) was a little early for this almost yearly winter vagrant.

DICKCISSEL: The few Dickcissels found were as usual all coastal. Individuals were at Pea I. on 28 August (Russ Tyndall), Cape Hatteras Campground on 23 October (Steve Dinsmore), and at Ft. Fisher on 16 November (Ralph Widrig).

CLAY-COLORED SPARROW: The only reports of this species came from North Carolina's Outer Banks with birds present from late September to mid-October. The peak count was of 5 at the northern end of Pea I. on 12 October (Steve Dinsmore).

LARK SPARROW: One was found at Folly Beach, SC on 21 August (Nathan Dias, Perry Nugent). One spent the period of 19 -26 September at the northern end of Pea I., NC (CBC and many others) and another was found at Cape Hatteras point on 25+26 September (CBC).

GRASSHOPPER SPARROW: A migrant at Ft. Fisher on 27+28 October (Ralph Widrig) was a good find, but a flock of migrants in Chapel Hill was amazing! While attending the President's speech in Kenan Stadium on 12 October, Haven Wiley noticed several small birds flying around in the infield. After the crowd had left, he was able to count and identify about 20! Grasshopper Sparrows in the stadium. Such a group of migrants actually being observed is rare and the numbers for this species are encouraging.

LINCOLN'S SPARROW: Fall reports in North Carolina included one at Pea I. on 2 October (Eric Dean) and 12 October (Steve Dinsmore), one at Ft. Fisher on 31 October (Ralph Widrig), one at Rocky Mount on 31 October (Ricky Davis), three in the Tryon area on 17+28 October and 4 November (Simon Thompson), and two at New Bern on 2 December (Bob Holmes). The only South Carolina report was of one banded in Lee County on 29 November (Lex Glover, John Cely, Kim Gundler).

LAPLAND LONGSPUR: Two near Rocky Mount, NC on 28 November (Ricky Davis) were the only ones reported for the fall.

SNOW BUNTING: This species was found only in North Carolina with one on Round Bald, Roan Mountain on 11 November (Rick Knight), one on the Oregon Inlet jetty on 13 November (Haven Wiley), two on Hump Mountain, Avery County on 23 November (Ed Schell, fide Rick Knight), and one on the beach at Avon on 29 November (Steve Dinsmore).

YELLOW-HEADED BLACKBIRD: This rare but regular fall visitor was found in North Carolina four times with a female at Eagle I., Wilmington on 11 September (Sam Cooper), a pair at a feeder in Salvo in early October (Steve Ryan, fide Steve Dinsmore), a male in Swansboro on 4 October (Betsy Gallagher, fide John Fussell), and a female or immature male at a Jacksonville feeder on 15 October (Vince Hedrick, fide John Fussell).

RED CROSSBILL: This species was a little more obvious in the North Carolina mountains this year than in past years. Three were seen flying over Grandfather Mountain on 7 August (Harry LeGrand), 6 were at Mt. Mitchell on 2 October (Russ Tyndall, Patricia Earnhardt), and one was on Roan Mountain on 11 November (Rick Knight).

PINE SISKIN: A flock of 20 was found on Roan Mountain on 23 November (Rick Knight) for the only fall report.

EVENING GROSBEAK: This species has been practically nonexistent the past six or more winters. This November that status changed! Grosbeaks started turning up throughout the area with the first report being two at Nags Head Woods, NC on the 9th (Paul Lehman, Shawneen Finnegan, Ken Hollinga). Twleve were at Greensboro, NC on the 10th (John King, fide Herb Hendrickson), one was in Transylvania County, NC on the 12th (Bill and Norma Siebenheller), and 15 were at Camden, SC on the 23rd (Lex Glover). And the winter invasion began in earnest with a flock of 80 at Roan Mountain on the 23rd (Rick Knight)!

Fall reports (August through November, 1994) for Briefs for the Files should be sent to the "Briefs" editor (Ricky Davis, P. O. Box 277, Zebulon, NC 27957) by December 20, 1994.

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# The Chat

(USPS 101-020)

SECOND CLASS POSTAGE PAID
at Raleigh, N.C. 27611

**Quarterly Bulletin of Carolina Bird Club, Inc.**
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**P.O. BOX 29555, RALEIGH, N.C. 27626-0555**

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Vol. 59 WINTER 1995 No. 1

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Quarterly Bulletin of Carolina Bird Club, Inc.
The Ornithological Society of the Carolinas

# THE CHAT

(USPS 101-020)
VOL.59 WINTER 1995 NO. 1
Published by the Carolina Bird Club, Inc.

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THE CHAT (USPS 101-020) is published quarterly by the Carolina Bird Club, Inc., with headquarters at the North Carolina State Museum of Natural Sciences, 102 N. Salisbury Street, Raleigh, NC 27603. Second-class postage paid at Raleigh, NC.
POSTMASTER: Send address changes to Carolina Bird Club, THE CHAT, P. O. Box 29555, Raleigh, NC 27626-0555.

Annual individual membership dues of $12 include $10 for a 1 year subscription the THE CHAT.

PAGE CHARGES: Authors who have funds available for page charges are requested to remit same at the rate of $40.00 per page. CBC Headquarters will provide statements required for your business records.

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CBC

# Status and seasonal distributions of Bicknell's and Gray-cheeked Thrushes in North Carolina

David S. Lee

Since the late 1950's identification and documentation of different races of native birds has not received much attention, and interest in subspecies has been limited to the studies of a few ardent ornithologists. Thus, Bicknell's Thrush, because it was regarded as a race of the Gray-cheeked Thrush (*Catharus mimimus*) has been largely ignored. The last discussion of this taxon in North Carolina's ornithological literature was in the revised 1959 edition of *Birds of North Carolina*. Despite the fact that it has long been a recognized component of the state's fauna, most local bird students remain unaware of this bird. Furthermore, excluding scattered sight reports, there is little published information on any of the 'gray-cheeked' thrushes in North Carolina. In this note I will clarify the taxonomic status and summarize the season of occurrence of these thrushes in the state.

Henri Ouellet (1993) recently reviewed the taxonomy of *Catharus mimimus* and concluded that the eastern and southern-most population, since the late 1800's (Ridgway 1882) regarded as a subspecies of the Gray-cheeked Thrush, is a valid species Bicknell's Thrush (*Catharus bicknelli*). Ouellet (1993) concludes that the Bicknell's Thrush has well-marked morphological differences when compared to adjacent populations of Gray-cheeked Thrushes, and that breeding and wintering ranges of the two thrushes do not overlap. Bicknell's Thrushes and Gray-cheeked Thrushes also have distinctive songs, they live in different habitats, and do not interbreed. Biochemical analysis of tissues confirms that there is a high level of divergence. Based on study of spectrograms, Evans (1994) documented the distinctiveness of the nocturnal flight call of the Bicknell's Thrush.

Bicknell's Thrush winters in the Greater Antilles, while the Gray-cheeked Thrush winters in Central and South America. Radar studies on migration patterns of song birds in New England indicate it is likely that the majority of Bicknell's Thrushes may migrate, like so many other songbirds, directly from New England and the Maritime Provinces to the Greater Antilles via an open Atlantic route. Based on fat deposits and known migration speeds of songbirds of similar sizes these birds would have no problem making this journey non-stop.

Ouellet (1993) does not include North Carolina in the species' documented distribution. He states that the migration patterns of this thrush are poorly known. He cites specimens in various collections documenting that during migration they occur in New Brunswick, Nova Scotia, Quebec, Ontario, Connecticut, New Jersey, New York, Virginia, South Carolina, and the Bahamas. An extralimital specimen is known from Bermuda (23 November 1957). The fifth edition of the American Ornithologists Union (A.O.U.) checklist simply states that *C. minimus bicknelli* migrates mainly east of the Alleghenies. McNair and Post (1993) summarized the status of *C. minimus bicknelli* for South Carolina. They reviewed the four records presented by

Sprunt and Chamberlain (1949), and confirmed the identification of two of the specimens. The South Carolina records were obtained between 1897 and 1927.

## HISTORY AND SYSTEMATICS

In their 1919 edition of *Birds of North Carolina* (Pearson et al. 1919) first reported on the occurrence the Bicknell's Thrush, in the state. They note "Bicknell's Thrush occurs at Raleigh sparingly in the migrations, having been taken from May 3 to May 18 in spring and from September 24 to October 12 in the fall. At Weaverville Cairns recorded it from September 11 to November 10 and stated that he once killed one on Black Mountain in August." In the 1949 edition of this book they include only one additional record "Wetmore reported one taken at South Port, May 12, 1939."

There is some potential, however, for confusion regarding these records. In the 1945 edition of the book, Pearson et al. (1945) provide the names *Hylocichla minima aliciae* Baird for the Gray-cheeked Thrush and *Hylocichla minima minima* Lafresnaye for the Bicknell's Thrush. While the scientific name provided for the Bicknell's Thrush was the correct one for the time it somewhat masked the identity of the birds in question (see below). Only two of the three taxa of gray-cheeked thrushes now documented to occur in North Carolina (this study) were recognized and subsequent revisions of the taxonomy leave some doubt as to which birds are actually discussed. Furthermore, the descriptions provided by Pearson et al. (1945) are not really adequate to separate the taxa involved. The measurements they provide are from literature and not actual North Carolina specimens; both *bicknelli* and the nominate *minimus* are small birds. Since the 1945 edition there have been no attempts to clarify the taxonomic status of this thrush in North Carolina, or to compare past or current names to actual specimens.

The brief (and incomplete) summary of the taxonmic history of gray-cheeked thrushes that follows illustrates the potential for problems caused by nomenclatural changes, size, and the difficulty of interpretting what was reported by our predecessors.

*1882*—Ridgway named the Bicknell's Thrush, *Hylocichla aliciae bicknelli*, as a subspecies of the Gray-cheeked Thrush, *Hylocichla aliciae*.

*1889*—The revised First Edition of the AOU Checklist and the 1895 Second Edition of the AOU Checklist, based on Coues (1884), reassigned *Hylocichla* to *Turdus*. Thus, *T. aliclae* is the Gray-cheeked Thrush and Bicknell's Thrush becomes *Turdus a. bicknelli*.

*1910*—By the Third Edition of the AOU Checklist both forms were re-assigned back to the genus *Hylocichla*.

*1915*—*Birds of North Carolina* included both the large Gray-cheeked Thrush as *Hylocichla aliciae aliciae* (Baird.) and the small Bicknell's Thrush as *H. a. bicknelli* (Ridgw.) as components of the state's fauna.

*1931*—The Fourth Edition of the AOU Checklist listed the Gray-cheeked Thrush as *Hylocichla minima aliciae* (Baird) and the Bicknell's Thrush became *Hylocichla minima minima* (Lafresnaye). The type locality of Lafresnaye's 1848 original description of *H. m. minima* is Bogota, Colombia, so this taxon had a composite geographic range of what will later be regarded as two species.

*1939*—Wallace evaluated *bicknelli* and provided a detailed study of the taxonomy, distribution and natural history of a bird still considered a race of the Gray-cheeked Thrush. He includes North Carolina in its migration range.

*1945—Birds of North Carolina* included the Gray-cheeked Thrush as *Hylocichla minima aliciae* Baird and Bicknell's Thrush as *Hylocichla minima minima* Lafresnaye.

*1949*—Bent published detailed accounts of the Gray-cheeked Thrush, *H. m. minima* and Bicknell's Thrush, *H. m. bicknelli* and made no mention of *aliciae*.

*1957*—By the Fifth Edition of the AOU Checklist, the nominate *minima* was regarded as the central and western subspecies and the southern and easternmost race was *Hylocichla minima bicknelli*. The geographic range of the latter was still a composite of the two small forms, but the type locality of *bicknelli* was at least within the breeding range of this taxa.

*1959—Birds of North Carolina* listed the Gray-cheeked Thrush as *Hylocichla minima minima* Lafresnaye and the Bicknell's Thrush as *H. m. bicknelli* Ridgeway, but otherwise copied the information from previous editions.

*1963*—Based on his examination of the holotype (now at the MCZ at Harvard) Todd restricted the nominate *minimus* (which by now was a species of *Catharus*) to the island of Newfoundland, described the distribution of the larger and more widespread *C. m. aliciae* and confirmed the earlier work of Wallace (1939).

*1983*—The Sixth edition of the AOU Checklist did not discuss subspecies and listed only *Catharus minimus* (Lafresnaye) as the Gray-cheeked Thrush.

*1993*—Ouellet recognized and re-described the southeastern subspecies of the Gray-cheeked Thrush, *Catharus m. bicknelli* as a full species, *Catharus bicknelli* and defined and restricted the birds breeding distribution to eastern New York north through New England, extreme southern Quebec, New Brunswick and the Gaspe Peninsula and Nova Scotia. While he lists states in which migrants are known to occur, he did not include North Carolina.

These examples illustrate that during the period when the various taxa of gray-cheeked thrushes were being reported for North Carolina (1919-1945) our systematic understanding of these birds was inadequate for identification. Published information is limited and not detailed enough to re-evaluate individual records for specific identification and the most recent study did not recognize many earlier published records of this taxa.

My examination of 21 North Carolina specimens of gray-cheeked thrushes in the North Carolina State Museum research collection indicated that none were *bicknelli*. Two specimens at UNC Greensboro likewise were not this species (Hendrickson pers. comm.). I wrote Richard Banks and asked that he check the 1939 specimen reported by Wetmore (in Pearson et al. 1949). He reports "Wetmore's 12 May 1939 specimen of *Catharus bicknelli* is in the USNM, #357650. It is an adult male, taken 5 mi SE Southport, Brunswick Co., by W. M. Perrygo and G. Rohweri the original number 3361 is on the label. "W.96" [wing 96 mm] has been penciled on the label."

Although Pearson et al. (1949) listed other North Carolina Bicknell's Thrush specimens the existence and location of these is unknown so the identification cannot be confirmed. The Brimley's and the other naturalists listed as collecting these bird specimens sold their skins to private collectors

and there are no existing records of these sales. While the original identifications are likely correct, this cannot currently be determined and the potential for confusion over subspecific names in Pearson et al. (1949) makes it unwise to blindly accept unverifiable specific historic records of this species pair. One additional report of the Bicknell's Thrush is available for North Carolina. A bird that struck a TV tower in Hillsboro on 11 May 1958 was noted as "prob. *bicknelli*" (Chat 22:71), but this report also lacks details which would allow confirmation of the identification.

Based on specimens in the N.C. State Museum and in the U.S. National Museum, *Catharus bicknelli*, *Catharus minimus minimus* and *Catharus minimus aliciae* all occur in North Carolina during migration.

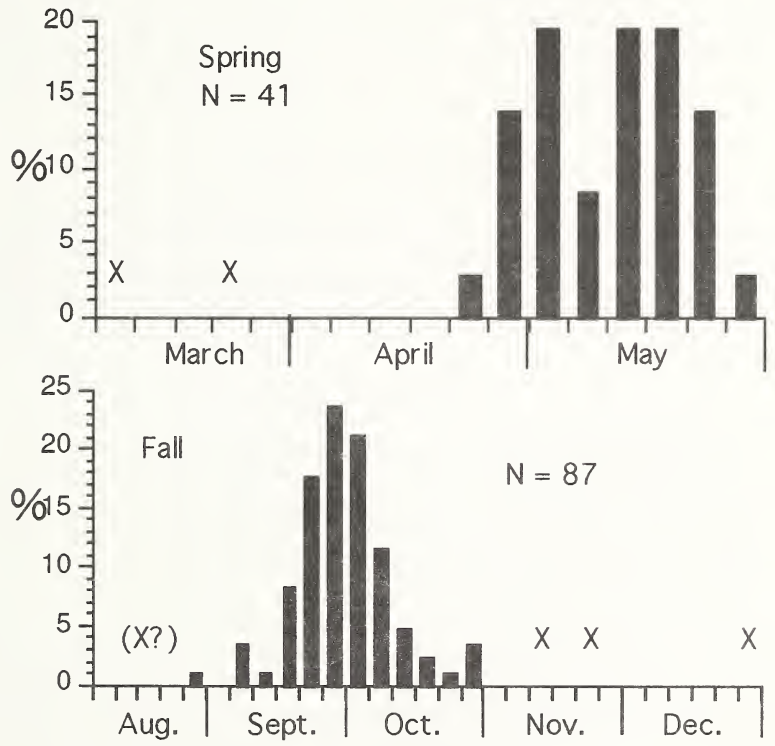
## NORTH CAROLINA RECORDS AND REPORTS

There is suprisingly little information available concerning gray-cheeked thrushes in North Carolina. In addition to the limited information in Pearson et al. (1945), a few published studies on local bird migration (i.e., Sykes 1986) and specimen records, there are only 36 scattered occurrence reports in over fifty-five years of seasonal accounts in *The Chat*. The following attempt to characterize these reports is biased by the unsystematic method of information-gathering. These figures probably reflect as much the seasonality of bird watchers as they do that of thrushes. Also based on the small number of reports, it is clear that few field observers have regularly made an effort to report Gray-cheeked Thrushes to the editors of regional literature. Most reports are of single birds (80%). The majority of reports are from the fall (>70%) and nearly all reports of multiple sightings on a single date are from the fall (72%). Locality records are from the coastal fringe (17%), elsewhere in the Coastal Plain (10%), the Piedmont (37%) and Mountains (35%). Little published habitat information is available. Burleigh recorded elevation information for one specimen from 6000 feet, which indicates these thrushes are likely to occur at all elevations in the mountains. Excluding the 49 skin specimen records (ca 40% of total records and reports), none of sight reports for North Carolina can be assigned to species. Additionally while skeletal material in museums (N = 2 in NCSM) cannot at this time be positively identified to species all appear to be *C. mimimus*. Based on recorded weights (30.0-35.9 grams) these skeletal specimens appear to be large individuals (North Carolina *minimus* with recorded weights N=7 27.0-36.6 [x=32.3] grams) and therefore not *C. bicknelli.*

## MIGRATION

The overall migration period is protracted when records of both the Gray-cheeked and Bicknell's Thrushes are combined. However, Sykes (1986) in 52 censuses of migrating birds on the Outer Banks of North Carolina (August through November 1965) found Gray-cheeked Thrushes on only 8% of his survey dates. A total of seven Gray-cheeked Thrushes were recorded between 30 August and 5 October in his studies. Banding efforts by Sykes in 1965 on Bodie Island yielded 7 individuals (26 September-6 October) out of 1,276 total birds captured in 1,317 net hours. He considered the species an uncommon fall transient. There are a number of fall reports from 1950's through the mid 1970's

from TV tower kills (i.e. Carter and Parnell 1976). They provide a large portion of the available information for this species pair in North Carolina. A composite of all reported migration records for both species (NCSM files, specimens, and published reports) indicates a spring migration of 24 April (Chat 25:62-63) to 30 May (Chat 26:81) and a fall return from 30 August (Sykes 1986) to 29 October (Chat 40:4). Carnes (in Brimley et al. 1949) cited a non-specimen record for 10 November. Other unseasonal reports which are not documented are available for 9 March and 28 December [1953] (Wray and Davis *in* Pearson et al. 1959 edition), 22 March 1953 (Chat 17:56-57), and 17 November 1975 (Chat 40:50). These later records are supported by no additional information and while they are not necessarily erroneous they are best disregarded at this time. Figure 1 illustrates the combined migration period for these two species of thrushes. It is based on specimen records (N = 51) and literature reports (N = 72). Approximately 75% of the fall migration passes through in a 20-day period in late-September and early-October. About 50% of these birds pass through North Carolina in spring migration in a 15-day period in mid-May.




Temporal distribution of gray-cheeked thrushes in North Carolina expressed as percent reported occurrence per 5-day period. X = out of season reports (see text). X? in August of unknown date from Cairns (Pearson, et al 1915).

Information on the local migration times of each species is more difficult to delimit as accurate specific identifications are only available from skin specimens. Specimens of *C. minimus* are available for 21 May and 8 September through 26 October. The single available North Carolina specimen of *C. bicknelli* is for 12 May 1939. Wallace (1939) notes that specimens of the Bicknell's Thrush taken from the southeast are from the period of 3-18 May.

The breeding and wintering range of *C. bicknelli* would indicate a migration route along the eastern Atlantic states and most records of the species are east of the Appalachians. Based studies of nocturnal flight calls, Evans (1994) documents their migration over east central Florida. In migration *C. bicknelli* could occur anywhere in the North Carolina. In addition to the Southport record, there are specimens (that have not been confirmed) reported from Weaverville, Black Mountain, and Raleigh. Likewise migrant *C. mimimus* occurs throughout North Carolina with specimens and reports from throughout the state.

The AOU Checklist (1957) indicated that *bicknelli* is reported casually from Illinois, Indiana, Ohio, Tennessee, West Virginia and southern Louisiana. Ouellet (1993), however, did not recognize any of these records in his discussion of migration and extralimital records. It is not clear if these earlier records were overlooked or if in Ouellet's revised description of *bicknelli* these specimens were regarded as *minimus*. In that prior to 1993 *bicknelli* was in part a composite of true *bicknelli* and eastern populations of *minimus* the picture will remain clouded until the specimens from various localities are re-examined. A similar problem exists in determining the migration patterns of *C. m. aliciae* and *C. m. minimus*. At various times the names of the two taxa were interchanged. Generally, however, it is assumed that *aliciae* is a migrant of the Mississippi basin. Therefore confirmed records of *aliciae* from North Carolina are interesting and unexpected. To date all North Carolina records of this race (N=20) are from the mountains, and all but one (21 May 1930, USNM 301585) are from the fall.

## IDENTIFICATION

Distinguishing transient Bicknell's from Gray-cheeked Thrushes will prove difficult. Chapman (in Pearson et al. 1945) notes that "while the difference between them in size is so slight that during their migrations, where both might be expected to occur together, it would be impossible to say which bird was under observation." While the re-evaluation of Ouellet (1993) leaves no question as to the species' status, certain color patterns show much overlap (e.g., dorsal, throat and ventral coloration of male and female *bicknelli*, compared to eastern races of *mimimus* (*mimimus* and *aliciae*). The chestnut coloration of the tail of both male and female *bicknelli* may be a distinction that will separate *bicknelli*. However, for most of us this will be a difficult field character to distinguish with certainty. I had the opportunity to observe a number of wintering *bicknelli* in the Dominican Republic in January of 1990 (*mimimus* is not known to winter in the Caribbean). In the patchy light of upland forest it was not possible to document the plumage characters necessary for identification.

I think everyone must recognize that it will be extremely difficult for field observers to distinguish *C. bicknelli* from *C. mimimus*. The problem is magnified, in that neither bird is a particularly common local migrant, and both are secretive and not particularly vocal during migration. It will require some diligence including notation of vocalization, for bird watchers to identify either species with confidence. However, with the recognition and confirmation that both Bicknell's and Gray-cheeked Thrushes occur in North Carolina people can now watch, or listen, for both officially. Those desiring unquestionable identifications can, of course, visit the birds either on their wintering or breeding grounds, or make recordings of nocturnal migrants and study frequency distributions on spectrograms. Eventually more complete information on the migratory habits of the two species in the Carolinas can be compiled if specimens salvaged as window kills and other mortalities are made available to institutions with systematics collections. Based on earlier reports the fall monitoring of TV tower mortalities could provide a considerable amount of material that would be useful in evaluation and comparison of the migration patterns of these two species. Additionally measurements and notes made by banders should be useful in further documenting the occurrence of these two species in the state. At this time most of the information previously compiled on the Gray-cheeked Thrush can not be unquestionably assigned to that species. While we are not exactly starting from scratch, our local understanding for both of the thrushes discussed is now quite limited.

## CONSERVATION STATUS

Recent evaluations of long-term monitoring studies strongly suggest an overall decline in many species of neotropical migrant songbirds (i.e., Askins, et al. 1990). While it can be argued that these birds are not declining faster than other types of wildlife, and it remains to be seen if the decline in these songbirds is actually exceeding the corresponding disappearance and fragmentation of habitats, the problem is nevertheless real. The conservation status of the Bicknell's Thrush, in particular, needs attention. While preparing this manuscript almost everyone I talked with indicated that gray-cheeked thrushes as migrants are much less common than they were several decades back. The decimation of habitats used by forest-dwelling neotropical migrants wintering in the Greater Antilles is alarming. For a species such as the Bicknell's Thrush, whose total wintering population is dependent on this area, the situation is not good. The two largest islands, Cuba and Hispaniola, obviously support the greatest areas of habitat for thrushes. The Haitian portion of Hispaniola, a country the size of Maryland, has been deforested for agriculture and for the charcoal industry. The border between the Dominican Republic and Haiti can be delineated by a line that is as visually well-marked as that between any field and forest. Extensive areas of agriculture also dominate much of the Dominican Republic. In that country these birds appear to be restricted to upland forest. Until the recent collapse of the Soviet Union and the loss of its economic ties with Cuba conservation and land ethics in Cuba were probably the best in the Caribbean. The current embargo enforced by the United States has cut off imported fuel, and has forced Cubans into developing massive charcoal works. This is devastating to Cuban woodlands. On the smaller

Caribbean islands most of the native hardwood vegetation was removed for lumber in previous centuries and many of the native winter fruiting hardwoods are in limited supply, or so young as to provide an insignificant and undependable food source for locally wintering birds.

Acknowledgments: I thank Richard Banks, National Biological Survey for information on these thrushes in the U.S. National Museum and for verifying the identification of the single specimen of *C. bicknelli*. Roxie C. Layborn, US National Museum, provided the subspecific identifications of *C. minimus* and Eloise Potter compiled many of the literature reports used herein. Mary K. Clark, Herbert T. Hendrickson, and Will Post reviewed the manuscript.

## LITERATURE CITED

American Ornithologists' Union. 1958. Checklist of North American Birds. Fifth Edition Amer. Ornithol. Union. Baltimore Md.

Askins, R. A., J. F. Lynch and R. Greenberg. 1990. Population declines in migratory birds in eastern North America. Current Ornithology 7:1-57.

Carter, J. H. and J. F. Parnell. 1976. TV tower kills in eastern North Carolina. Chat 40:1-9.

Evans, W. R. 1994. Nocturnal flight call of Bicknell's Thrush. Wilson Bulletin 106:55-61.

McNair, D. B. and W. Post. 1993. Supplement to status and distribution of South Carolina birds. Charleston Museum Ornithological Contribution No. 8. 49 pp.

Ouellet, H. 1993. Bicknell's Thrush: Taxonomic status and distribution. Wilson Bulletin. 105(4):545-754.

Pearson, T. G., C. S. Brimley, and H. H. Brimley. 1915. Birds of North Carolina. North Carolina Geological and Economic Survey. Vol. IV. 380 pp.

Pearson, T. G., C. S. Brimley, and H. H. Brimley. 1942. Birds of North Carolina. N.C. Department of Agriculture, Raleigh. 416 pp.

Ridgway, R. 1882. Descriptions of two new thrushes from the United States. Proc. U.S. Nat. Mus. Vol. 4, 1881:374-379.

Sprunt, A., Jr. and E. B. Chamberland. 1949. South Carolina Bird Life. Contribution Charleston Museum No. 11.

Sykes, P. W., Jr. 1986. Autumn land-bird migration on the barrier islands of northeastern North Carolina. Occasional Papers of the North Carolina Biological Survey. 1986-11:1-49.

Todd, W. E. C. 1963. Birds of the Labrador Peninsula and adjacent areas. Univ. toronto Press, Toronto, Ontario.

Wallace, G. J. 1939. Bicknell's Thrush, its taxonomy, distribution and life history. Proc. Boston Soc. Nat. Hist. 41:211-402.

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## SPRING BIRD COUNT — 1994

PEGGY V. FEREBEE

We had 13 locations participate in the 1994 Spring Bird Count, down from 17 last year. A number of last year's respondents participated in the National Migratory Bird Count Day and found it difficult to hold two counts so close together. The area covered by this year's count is still predominantly in the Piedmont section of North Carolina. There were two North Carolina counts from the foothills and no coastal counts. Only three of the 13 counts were from South Carolina, two coastal, one inland. We really need more areas covered.

I would like to thank those complier's who took time to submit comments. I am sure there is a great deal of discussion at each countdown concerning that count's results. I would like to have more of this submitted. What do you think is affecting the birds in your area? It is habitat change, are you loosing veteran observers, was the weather really strange? This is the kind of information that is just as valuable as numbers and the compilers are the ones who can submit it. Also document unusual or rare birds or I may be forced to delete the report. Be sure to explain why it is not a more common similar species.

The decrease in number of count areas is reflected in the count totals. While we actually had more species reported (239 versus 226 last year), the number of individuals seen was down (74930 versus 86409 last year). Observers put in a total of 1152 hours, as compared to 1224.5 hours last year. Generally the weather was good, with a little early rain in a few counts. The temperature was seasonal. One compiler suggested that the warm weather preceeding the count may have decreased the number of winter and transient migrants they saw in their area.

Generalizing about avian population trends can be difficult when dealing with a short time span. However, in looking back over the 1992 summary and the 1993 count and comparing it to the 1994 results, some observations can be made.

Double-crested Cormorants continue to be perfectly comfortable inland, appearing in all counts. Ring-billed Gulls continue to increase inland as well. Fish Crows appeared everywhere except the foothill regions. Loggerhead Shrikes showed an increase again , from 45 in 1992, 74 in 1993 to 92 in 1994. We did see some winter finches this count, with Evening Grosbeaks showing up at Jordan Lake and 5 counts with Pine Siskins. Only two counts reported Purple Finches, which I hope means observers are being careful to differentiate between Purple and House Finches. Unfortunately that also means that House Finches continue to be more common while Purple Finches become rarer. Bachman's Sparrow was found in an additional count area, bringing the total to three.

There were some notable decreases. Eastern Phoebes were down. A mere 25 Ruby-crowned Kinglets were seen as opposed to 125 last year. Last year 258 Ruby-throated Hummingbirds were reported, but only 128 were seen this year. That supports the complaints I received all summer from folks who wanted to know where their hummingbirds were! Unfortunately, all the vireos but Red-eyed showed a decrease. The number of warbler species reported stayed the same, but the number of individuals was down considerably, 8304 individuals

reported last year as compared to 5868 this year. Part of this decrease is due to fewer count areas being reported this year. But in 1992, with the same number of counts and fewer total field hours, 7257 individuals were reported. We're seeing fewer birds. House Sparrows continue to decline, which won't disappoint a lot of people. Despite their name, House Sparrows are birds that do better in rural areas and that habitat is declining in many count areas. Eagles also seemed to be down, in areas where they have been reported in the past but there is a bright note here. Greensboro reported a pair which successfully hatched a chick this spring and seem to be raising it successfully. This represents a new nesting area for this species.

## COMPILER'S COMMENTS

**GVNC-** GREENVILLE, NC. 35° 35"N, 77 ° 14'W, as described in Christmas '93, jct,. CR. 1762 and SR 433, Greenville, NC. May 1, 5:15 a.m. to 5:00 p.m. Temp. 55°-83°F. Precipitation none, wind 5-10 mph, sky clear.

**Participants:** Compiler John Wright, 1953A Quail Ridge Rd., Greenville, NC 27858; Co-compiler Veronica Pantelidis, 106 Lakeview Dr., Greenville, NC 27858; Mary Atkenson, Patricia Earnhardt, Lorrayne Graff, Ken Harrell, Dave Kaminski, Jill Kaminski, Gary Kerbaugh, Dr. Ernie Marshall, Rick Payne, Russ Tyndall, Paula Wright.

**Compiler's comments:** The Common Merganser, which is uncommon in Pitt County during the winter, appeared similar to first spring male as illustrated in the National Geographic Society field guide.

**SPNC-**SOUTHERN PINES, NC. 35°13'N 79°19'W, as described on Christmas Count, center 1 mile NE of skyline. May 1, 5:15 a.m. to 10:00 p.m. Temp. 70°F-85°F. Precipitation none, wind 9 m.p.h in a.m. to 4 m.p.h in p.m. Sky mostly cloudy.

**Participants:** Compiler Dr. J.H. Carter, III, P.O. Box 891, Southern Pines, NC 28388; Co-compiler Elizabeth Watson, 208 Rob Roy Road, Southern Pines, NC 28387; Jackie Britcher, Mary Burner, Crawford Caton, Hazel Caton, Bob Corey, Faust d'Ambrosi, Beth Evans, Esther Fleming, Charlotte Gantz, David Gordon, Dean Holzgraf, Tom Howard, Marion Jones, Gloria Lizenby, Al McDonald, Billy McKenzie, Winifred Monroe, Kevin Shea,Vavd Travis, Libba Watson.

**Compiler's comments:** Alder Flycatcher may represent first record for area. Seen by Charlotte Gantz (who is familiar with species) and party near Lakeview, in the edge of a black gum swamp. It was identified by its "fee-bee-o" song.

**RVNC-**RAVEN ROCK STATE PARK, NC. Intersection of NC 210 and SR 1434, 2.75 miles north of Lillington. April 30, 5:30 a.m.-5:00 p.m. Temp 60°F-90°F. Precipitation none, wind S-SW, 0-12 m.p.h.. Sky clear.

**Participants:** Compiler Paul C.Hart, Raven Rock State Park, Rt. 3, Box 1005, Lillington, NC 27546; David Brown, John Bumgarner, Susan Bumgarner, Pete Cashwell, Scott Hartley, Dick Holbrook, Bobby Lutfy, Anne Maker, Larry Rose, Kathy Rowland, Larry Rowland, Mary Stevens.

**Compiler's comments:** The center of the count circle was moved about 2 3/4 miles to the north of the former circle. This move was made primarily to include two large ponds southeast of the town of Angier. It is hoped that this will get more waterfowl on the Christmas Bird Count. The number of species seen was slightly up from 1993, although the number of individuals seen was slightly lower. The Anhinga was seen by Scott Hartley and Dick Holbrook at a farm pond on the southwest side of the circle and represents a first for this count. For a second year in a row, a Swainson's Warbler was seen, the third record of this bird for this count. The bird was seen by Larry Rose and Bobby Lutfy. The Least Sandpipers were seen feeding at a drained lagoon at the Lillington Wastewater Treatment Plant. An encouraging 14 Loggerhead Shrikes were tallied. It hasn't been too long ago that we really had to "beat the bushes" to find a shrike. Let's hope the trend continues. Paul Hart and David Brown had King Rails respond to a taped call in the same location they were found in 1992. The birds were not seen. Later in that day, ironically, they found a road-killed King Rail about a mile from the aforementioned location. Mary Stevens had two slightly late Pine Siskins still at her feeder, as well as two Northern Orioles still feeding on peanut butter mix.

**RANC-**RALEIGH, NC. 35°46'N ,78°40'W; center Norfolk and Southern R.R. and Lake Wheeler Rd. crossing. April 30, 5:00 a.m. -8:00 p.m. Temp 62°-82° F, precipitation none, wind SW at 8 m.p.h.. Sky clear.

**Participants-** Compiler Bob Hader, 3313 Cheswick Drive, Raleigh, NC 27609; Faye Bennett, Doug Brame, Jerone Brewster, Hal Carmichael, John Conners, Will Cook, Leigh DeNeef, Steve Dinsmore, Ron Ferrell, John Finnegan, Peggy Franklin, Susan Grove, Nancy Guthrie, Elizabeth Hanson, Diane Hardy , Stephanie Horton, Wayne Irvin, Sam Janke, Vernon Janke, Mark Johns, Will Kimler, Barbara King, Ken Knapp, Gail Lankford, Herman Lankford, David Lenat, Margaret Marlett, Claire McCullough, Joan McGuire, Jim Mulholland, Monica Nees, Bob O'Brien, Tom Quay, Suzanne Rowland, Will Rowland, Karen Russell, Harriet Sato, Clyde Smith, Julie Stewart, Chris Walters, Jeff Walters, Rebecca Walters.

**Compiler's comments:** Temperatures in the 80's and southerly winds for five or six days prior to the count day apparently was responsible for the lack of lingering winter residents and also for the comparatively small numbers of transient migrants, especially transient warblers and thrushes. Among the more unusual finds were an American Bittern heard calling, a female Hooded Merganser (probably breeding), a King Rail, two adult and two young Barred Owls at a nest, and a male Cerulean Warbler.

**DUNC -** DURHAM, NC. 36°09'N, 78°40"W, center one mile east and one mile south of jct. Eno River and US 501. April 24, 5:30 a.m.-9:00 p.m. Temp 44°F-79°F, wind SE 5-10 m.p.h. Sky clear.

**Participants:** Compiler-Michael Schultz, 5504 Woodberry Rd., Durham, NC, 27707; Bryan Bomberg, Norm Budnitz, Will Cook, Anson Cooke, Greg Dodge, Peggy Franklin, Maurice Graves, Steve Graves, Susan Grove, Dorothy Irvin, Ken Knapp, Janet Krakauer, Tom Krakauer, David Longley, Owen McConnell, Len Pardue, Lauren Parmelee, Dorothy Rettig, Richard Rettig,

Harriet Sato, Lois Schultz, Doug Shadwick, Jonathan Steere, Karen Stirrup, Shigeka Tach, Edith Tatum, Carol Tingley.

**CPNC** - CHAPEL HILL, NC. 35°55'N, 79°03'W, center intersection of Franklin St. and Airport Rd. in Chapel Hill. May 8, 5:20 a.m. to 8:15 p.m. Temp. 50° - 75°, Sky overcast with spotty morning rain, light breeze.

**Participants:** Compiler-Anson R. Cooke, 1210 Huntsman Dr., Durham, NC, 27713; N. Budnitz, R. Chase, W. Cook, C. Cooke, G. Dodge, K. Fiala, B. Fisher, M. Graves, S. Graves, P. Haaland, W. Haywood, F. Hommersand, J. Huggins, M. Huggins, B. Johnson, S. Kahler, J. Keighton, K. Knapp, E. Link, H. Link, K. Lundstrom, C. McCormick, J. McCoy, M. Mudd, L. Pardue, L. Parmeleee, M. Pifer, K. Powell, Z. Ralston, T. Robert, B. Roth, H. Sato, L. Schultz, M. Schultz, D. Shadwick, J. Shields, S. Tachi, P. Timmons, L. Todd, E. Wagstaff.

**JLNC**-JORDAN LAKE, NC. 35°42'N, 79°03"W, as described for Christmas '93, center former crossing of Pea Ridge Rd. and New Hope River (now under water). May 1, 5:00 a.m. to 7:45 p.m. Temp. 65°F-83°F with slight, early precipitation, wind SW 5-15. Sky cloudy with slight precipitation around 8 a.m. then clearing.

**Participants:** Compiler-Barbara Roth, 7 Lower Pine Rd.,Chapel Hill, NC 27514. Co-compiler-Will Cook, 418 Sharon Rd., Chapel Hill, NC 27514; Dennis Alwon, Barbara Beaman, Barbara Brooks, Halbert Carmichael, Kathleen Carpenter, Will Cook, Anson Cook, Claudia Egelhoff, Bert Fisher, Peggy Franklin, Bryan Goldston, Maurice Graves, Steve Graves, Perry Haaland, Steve Hall, Willard Hartman, Carol Hay, Walton Haywood, Chuck Helmick, Russell Herman, Fran Hommersand, Dorothy Irvin, Steve Kahler, Ray Kandt, John Kent, Memuna Khan, Ken Knapp, Edward Kuenzler, Winston Lanchaster, Henry Link, Barbara Logue, Terry Louge, Ginny Long, Roy Lumb, Phil Manning, Melinda Meade, Roger McNeill, Lynn Milich, Judy Murray, Monica Nees, Megan O'Conner, Todd Plummer, Kevin Powell, Zachary Ralston, Dorothy Rettig, Richard Rettig, Tabias Rotthaler, Harriet Sato, Peg Schultz, Julia Sheilds, Carol Tingley.

**Compiler's comments:** This was a rather lackluster count, with fewer species than we have had since the first year of this count (1977). This year we saw no loons or grebes, few Black Vultures, only two Bald Eagles, and no sandpipers or plovers other than Killdeer, Woodcock, and Spotted and Solitary Sandpipers. There were no tern species. The number of Yellow-billed Cuckoos was down. We had no Great Horned Owls for the very first time. There were fewer Barn Swallows and Purple Matins than usual. No Swainson's Thrush or Veery were heard, although they are in my yard as of May 18. The number of Starlings, Grackles and Yellow-rumped Warblers were also down. Our total warbler species was at a near low of 20. For the first time we had no Bobolinks. The Eastern Bluebirds and Blue-grey Gnatcatchers are doing well and there is quite an increase in the number of Canada Geese and Fish Crows.

This count circle is an area of continual change. Bulldozing for the lake commenced in 1977, when the count began. Since then the area has gone through a prairie grass stage (before impoundment) which encouraged such species such as the Short-eared Owl, Northern Harrier and Dickcissels. As the

lake filled, surounding farm lands began a normal succession which is now in the pine forest stage. At the southeast edge, Shearon Harris nuclear plant was developed. This included Harris Lake, part of which is in our circle but difficult to access. Many bedroom communities have been and are being developed on some of this land, hence the nature of our bird life is gradually changing. This could be better monitored by frequent breeding bird censuses rather than spring counts, but we do get some appreciation for the change. Also worth mentioning is a huge new "wilderness" camping area and boat ramps which has just been opened by State Parks this spring, with new unfamiliar topography.

This year's count was also affected by the absence of several of our ace party leaders who had been counting the same areas over a period of years and hence knew exactly what to expect. Even though we did have competent party leaders in all 19 areas covered, many were totally unfamiliar with them (especially such areas as the new "wilderness" campground area, where a highly competent party walked at least 6 miles without seeing anything of note except a Wild Turkey, which of course was a very worthwhile observation).

However, there were some bright spots quite worthy of note. We have had a small colony of Bachman's Sparrows in a clearcut area at the bottom of our count circle for several years now but did not expect this to last, since new pines spring up so very fast. However, Terry Logue found an ideal spot, where at least a half dozen Bachman's Sparrows were singing on territory, and he actually observed a pair copulating. (A map and report was included)

Our party was fortunate in finding a female Western Tanager, also near the south end of the circle. The bird was very well observed by three of us. We all remarked on the wing bars which are the trademark of this species. (A report was included).

A third bird worthy of note may be a partial albino. One wonders of it could conceivably be a hybrid sparrow. Claudia Eglehoff submitted two drawings, made by herself and another party member. The bird resembles a Chipping Sparrow, with a bold white forehead and white throat, and bright rusty crown. It apparently was a very striking bird. She noted "a little larger than a Chipping Sparrow" but evidently did not have a direct comparison at hand. The bird walked, rather than hopped. Does a Chipping Sparrow walk? I don't know. They usually are not situated in a location where they might be walking. So I submit this for someone more knowledgeable than I. It is called "Sparrow Species" on our report.

**GRNC**-GREENSBORO, NC.36°04'N, 79°47'W, center at the intersection of Pisgah Church Rd. and Highway 220N. May 7, 6:30 a.m.-8:00 p.m. Temp. 58°F to 78°F, no precipitation, wind S 8 m.p.h. in the morning and SW 15 m.p.h. in afternoon. Sky clear in the morning, overcast in the afternoon.

**Participants:** Compiler: Donald Allen, 2611 David Caldwell, Greensboro, NC 27408; Carolyn Allen, Virginia Bell, Jeff Brown, Lynn Burnette, Charles Cambell, Nancy Carlson, Phil Crisp, Peggy Ferebee, Delores Foutch, Wally Foutch, Larry Gasper, Linda Gonzales, John Grove, Nancy Hannah, Carol Harrison, Herb Hendrickson, David Humphreys, Elizabeth Link, Henry Link, Jean McCoy, Clarence Mattocks, Jim Mattocks, Bob Moore, Ron Morris, Lynn Moseley, Pamela Odear, Evelyn Schoonover, John Schoonover, Tom Street, Emily Tyler.

**Compiler's comments:** In spite of expressed concerns about a late count date this year's count is one of the best we have had in several years. The weather cooperated and we seem to have struck it lucky in terms of migrating populations.

The Red-necked Grebe was reported by Henry Link and I presume that this is the bird that was hanging around Lake Brandt. Herb Hendrickson reported the Caspian Tern and the Great Cormorant. Lynn Moseley's group reported the Ruby-crowned Kinglet. Jean McCoy's group reported the Little Blue Heron. Jim Mattocks reported the Bobolink from the airport area. He and another member of his party devoted a good bit of scope time to identifying this bird as a female Bobolink. John Schoonover's party reported the Rusty Blackbird. A pair of Bald Eagles have been monitored at Lake Higgins, one of the city reservoirs, since their appearance in the area in Janurary and in April they successfully hatched a chick.

**WSNC-** WINSTON-SALEM, NC. 36°05'N, 80°18'W, center at Business I40 and Silas Creek Parkway. May 7, 5:00 a.m. to 9:30 p.m. Temp. 61°F to 79°F, no precipitation, Wind SW 0-gusts of 15 m.p.h. Sky cloudy in the morning to clear in the afternoon.

**Participants:** Compiler - Hop Hopkins, 313 Susanna St., Kernersville, NC 27284; Sue Bishop, Ed Bowden, Todd Buchanan, Regina Burt, John Cater, Hartsell Cash, Mrs. Robert Clodfelter, Peg Cochrane, Rebecca Deaton, Paul Decker, Mrs. William DeGraw, Doug DeNeve, David Disher, Susan Disher, Cynthia Donaldson, Tom Echols, Mary Erikson, Charles Frost, Dale Gano, Gardner Gidley, Margaret Gidley, Bill Hammond, John Hammond, Susan Hammond, Rodney Harden, Bert Hollifield, Lois Jones, Ray Kandt, Jay Kaplan, Jessica Kaplan, Barbara Kendrick, Leon Kendrick, Jim Martin, Tom Mowbray, Ed Mulvey, Ann Newsome, Suzanne Newsome, Elsie Orr, Paul Powers, Lloyd Ramsey, Jackie Shelton, Marilyn Shuping, Mike Shuping, Joy Skafidas, Ramona Snavely, Paul Spain, Bill Sugg, Gray Tuttle, Harrison Tuttle, Don Whitener, Jay Wilhelmi.

**Compiler's comments:** The Fish Crow was sighted at the Forsyth County Landfill by a party composed of Bill and Susan Hammond, Cynthia Donalson, Paul Decker, Jake Kaplan, Jessica Kaplan, and myself. American Crows were in the area. The Fish Crow was foraging with Starlings and Grackles and its dimensions as a small crow were readily comparable to the smaller birds it was associating with. However, the determination of this bird as a Fish Crow was not made until it was plainly heard to call. It was joined within two to three minutes by three others. This is the second record of Fish Crows for the landfill on a Spring Count The first was made by Susan Hammond, Cynthia Donaldson, Todd Buchannon and myself of 1 May, 1993.

**ICNC-**IREDELL COUNTY, NC. 35°54'N, 82°53'W, center Chipley Ford Road Bridge at South Yadkin River. May 1, 6:30 a.m. to 5:00 p.m. Temp. 62°F to 82° F, trace of precipitation in early morning, Wind S-SW 10-12 m.p.h. Sky cloudy to sunny in the morning and sunny in the afternoon.

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | 1 | | | | | | | | | | | 1 | | | 2 |
| Pied-billed Grebe | | | | | | | | 3 | | | | 1 | | | 4 |
| Red-necked Grebe | | | | | | | | 1 | | | | | | | 1 |
| Northern Gannet | | | | | | | | | | | | 1 | | | 1 |
| Brown Pelian | | | | | | | | | | | | 303 | | | 303 |
| Great Cormorant | | | | | | | | 1 | | | | | | | 1 |
| Dlb-crtd Cormorant | 77 | 29 | 1 | 1 | 292 | 61 | 151 | 27 | 20 | 2 | 6 | 513 | 2 | 1 | 1183 |
| Anhinga | | | 1 | | | | | | | | | 21 | 4 | | 26 |
| American Bittern | | 1 | | 1 | | | | | | | * | 1 | | | 3 |
| Least Bittern | | | | | | | | | | | | 3 | | | 3 |
| Great Blue Heron | 20 | 5 | 2 | 11 | 5 | 3 | 14 | 7 | 2 | 7 | 5 | 52 | 11 | 2 | 146 |
| Great Egret | 9 | | | | | 1 | | | | | | 104 | 3 | | 117 |
| Snowy Egret | | | | | | | | | | | | 207 | | | 207 |
| Little Blue Heron | | | | | 1 | | | 1 | | | | 48 | | | 50 |
| Tricolored Heron | | | | | | | | | | | | 49 | | | 49 |
| Cattle Egret | | | | | | | | | | | | 82 | | | 82 |
| Green-backed Heron | 4 | 6 | 7 | 28 | 3 | 4 | 8 | 11 | 11 | 3 | 6 | 95 | 1 | 3 | 190 |
| Black-cr. Night-Heron | | | | | 2 | | | | | | | 152 | | | 154 |
| Yellow-cr. Night-heron | | | | | | | | 4 | 3 | | | 13 | 1 | | 21 |
| Night-heron sp. | | | 1 | | | | | | | | | | | | 1 |
| White Ibis | | | | | | | | | | | | 22 | 15 | | 37 |
| Glossy Ibis | | | | | | | | | | | | 1 | | | 1 |
| Canada Goose | 14 | 11 | 69 | 93 | 94 | 120 | 63 | 189 | 207 | 59 | 15 | | 7 | 56 | 997 |
| Wood Duck | 8 | 16 | 22 | 87 | 48 | 54 | 23 | 7 | 17 | 1 | 2 | 13 | 12 | | 310 |
| American Black Duck | | | | | 5 | | | | | | | | | | 5 |
| Mottled Duck | | | | | | | | | | | | 2 | | | 2 |
| Mallard | 23 | 54 | 16 | 65 | 56 | 35 | 39 | 217 | 155 | 19 | 10 | 3 | | 67 | 759 |
| Blue-winged Teal | | 8 | | | 2 | | | | | 2 | * | | | | 12 |
| Ring-necked Duck | 1 | 1 | | | | | | | | | | | | | 2 |
| Hooded Merganser | | | | 1 | | 2 | 4 | | | | | | | | 7 |
| Common Merganser | 1 | | | | | | | | | | | | | | 1 |
| Red-br. Merganser | | 1 | | | 1 | | | 11 | | | | | | | 13 |
| Ruddy Duck | | | | | 1 | | | 1 | | | | | | | 2 |
| Duck sp. | | | | | | | 12 | | | | | | | | 12 |
| Black Vulture | * | | 1 | 1 | 6 | 24 | 4 | 3 | 2 | 5 | 1 | 38 | 6 | 1 | 92 |
| Turkey Vulture | 14 | 6 | 12 | 24 | 41 | 55 | 127 | 29 | 21 | 21 | 2 | 67 | 16 | 18 | 453 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Osprey | 1 | | 2 | 1 | 11 | | 20 | 5 | 7 | 3 | * | 66 | | | 116 |
| Am Swallow-td Kite | | | | | | | | | | | | 4 | 1 | | 5 |
| Mississippi Kite | | | | | | | | | | | | 9 | 4 | | 13 |
| Bald Eagle | 2 | | | | 2 | 5 | 2 | 2 | | | | 1 | | | 14 |
| Northern Harrier | | | | 1 | 1 | | | 2 | | | | | | | 4 |
| Sharp-shinned Hawk | | | | 1 | 4 | 1 | 1 | 2 | * | 5 | | | 1 | | 15 |
| Cooper's Hawk | 1 | 1 | 2 | | 5 | 3 | 2 | 2 | * | 1 | | | | 1 | 18 |
| Acciper sp. | | | 1 | | 1 | | | | | | | | | | 2 |
| Red-shoulder Hawk | 4 | 3 | 8 | 10 | 7 | 17 | 15 | 6 | 2 | 3 | | 2 | 5 | 4 | 86 |
| Broad-winged Hawk | | 1 | 1 | 2 | | 3 | 2 | 1 | 3 | 1 | | | 2 | | 16 |
| Red-tailed Hawk | 11 | 7 | 14 | 28 | 26 | 30 | 22 | 13 | 18 | 10 | 2 | 24 | 7 | 10 | 222 |
| American Kestral | 3 | 1 | | 3 | 3 | | | 3 | | 1 | 2 | 12 | | | 28 |
| Wild Turkey | 1 | | | | 2 | | 1 | | | 1 | | 15 | 3 | * | 23 |
| Northern Bobwhite | 25 | 14 | 15 | 14 | 31 | 8 | 26 | 19 | 15 | 17 | 3 | 35 | 25 | 7 | 254 |
| Clapper Rail | | | | | | | | | | | | 44 | | | 44 |
| King Rail | | | 2 | 1 | | | | | | | | | | | 3 |
| Virginia Rail | | | | 3 | | | | | | | | 1 | | | 4 |
| Purple Gallinule | | | | | | | | | | | | 1 | | | 1 |
| Common Moorhen | | | | | | | | | | | | 58 | | | 58 |
| Black-bld. Plover | | | | | | | | | | | | 204 | | | 204 |
| Wilson's Plover | | | | | | | | | | | | 203 | | | 203 |
| Semipalmated Plover | | | | | | | | | | | | 686 | | | 686 |
| Killdeer | 37 | 19 | 33 | 38 | 34 | 30 | 27 | 34 | 33 | 29 | 5 | 74 | 4 | 10 | 407 |
| Am. Oystercatcher | | | | | | | | | | | | 57 | | | 57 |
| Black-necked Stilt | | | | | | | | | | | | 5 | | | 5 |
| Greater Yellowlegs | 1 | | 1 | 4 | | | | 2 | | | | 32 | | | 40 |
| Lesser Yellowlegs | | | | 3 | | | | | 1 | | | 11 | | | 15 |
| Solitary Sandpiper | 3 | | 5 | 19 | | 7 | 2 | 17 | 24 | 1 | 5 | 2 | | 3 | 88 |
| Willet | | | | | | | | | | | | 85 | | | 85 |
| Spotted Sandpiper | 1 | 14 | 9 | 24 | 9 | 10 | 31 | 48 | 38 | 4 | 15 | 15 | 1 | 5 | 224 |
| Whimbrel | | | | | | | | | | | | 132 | | | 132 |
| Marbled Godwit | | | | | | | | | | | | 10 | | | 10 |
| Ruddy Turnstone | | | | | | | | | | | | 25 | | | 25 |
| Red Knot | | | | | | | | | | | | 60 | | | 60 |
| Sanderling | | | | | | | | | | | | 20 | | | 20 |
| Semip. Sandpiper | | | | 1 | | | | | | | | 7 | | | 8 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Western Sandpiper | | | | | | | | | | | | 2 | | | 2 |
| Least Sandpiper | | | 40 | 58 | | | | | 12 | | | 5 | | | 115 |
| White-rumped Sandp | | | | | | | | | | | 9 | | | | 9 |
| Pectoral Sandpiper | | | | | | | | | 1 | | | | | | 1 |
| Dunlin | | | | | | | | | | | | 287 | | | 287 |
| Short-bd Dowitcher | | | | | | | | | | | | 383 | | | 383 |
| Long-bd Dowitcher | | | | | | | | | | | | 10 | | | 10 |
| Common Snipe | | | | 2 | 1 | | | | | | 1 | | | | 4 |
| American Woodcock | | | | 4 | | | 1 | | | | | | | 2 | 7 |
| Laughing Gull | | | | | | | | | | | | 710 | | | 710 |
| Bonaparte's Gull | | | | | | | 11 | | | | | | | | 11 |
| Ring-billed Gull | 3 | 17 | | 18 | 154 | 11 | 640 | 12 | | | 12 | 27 | | | 894 |
| Herring Gull | | | | | 1 | | 3 | | | | | 12 | | | 16 |
| Gull sp. | | | | | | | 4 | | | | | | | | 4 |
| Gull-billed Tern | | | | | | | | | | | | 21 | | | 21 |
| Caspian Tern | | 1 | | | | 4 | | 1 | | | * | | | | 6 |
| Royal Tern | | | | | | | | | | | | 93 | | | 93 |
| Sandwich Tern | | | | | | | | | | | | 35 | | | 35 |
| Common Tern | | | | | | | | | | | | 5 | | | 5 |
| Roseate Tern | | | | | | | | | | | | 1 | | | 1 |
| Forster's Tern | | | | | | 24 | | | | | | 42 | | | 66 |
| Least Tern | | | | | | | | | | | | 49 | | | 49 |
| Black Skimmer | | | | | | | | | | | | 61 | | | 61 |
| Rock Dove | 37 | 10 | 31 | 355 | 117 | 50 | 17 | 82 | 126 | 24 | 15 | 10 | 2 | 9 | 885 |
| Mourning Dove | 150 | 157 | 190 | 241 | 172 | 220 | 259 | 263 | 259 | 223 | 93 | 168 | 90 | 96 | 2581 |
| Common Ground Dove | | | | | | | | | | | | 1 | | | 1 |
| Black-billed Cuckoo | | | | | | | | | 1 | 1 | | 4 | | | 6 |
| Yellow-billed Cuckoo | 8 | 4 | 3 | 4 | | 8 | 10 | 1 | 6 | | | 51 | 18 | 5 | 118 |
| Common Barn-Owl | | | | | | | | | | | 2 | | | | 2 |
| East. Screech Owl | 2 | 2 | 2 | 2 | | | 2 | 1 | 6 | | 1 | 5 | 1 | 6 | 30 |
| Great Horned Owl | 3 | 2 | 2 | 1 | 2 | | | 3 | 2 | 1 | | 3 | 1 | * | 20 |
| Barred Owl | 6 | 1 | 2 | 11 | 11 | 12 | 11 | 11 | 1 | 2 | | 18 | 8 | 1 | 95 |
| Common Nighthawk | 1 | 1 | | 2 | | 1 | | 8 | 12 | 2 | 5 | 4 | | 1 | 37 |
| Chuck-will's widow | 9 | 27 | 13 | 4 | 1 | 1 | 3 | | 7 | 1 | | 63 | 4 | 3 | 136 |
| Whip-poor-will | 7 | 16 | 2 | 1 | 11 | 10 | 19 | 3 | 2 | 5 | | 13 | 12 | 5 | 106 |
| Chimney Swift | 63 | 85 | 72 | 152 | 87 | 254 | 134 | 163 | 201 | 84 | 25 | 370 | 246 | 106 | 2042 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ruby-thr. Hummingbird | 4 | 5 | 7 | 5 | 10 | 21 | 25 | 7 | 16 | 2 | 10 | 9 | 6 | 1 | 128 |
| Belted Kingfisher | 5 | 4 | 11 | 21 | 7 | 4 | 11 | 12 | 5 | 4 | 3 | 3 | 4 | 3 | 97 |
| Red-headed Woodpecker | 1 | 3 | 1 | 28 | 2 | 16 | 8 | 18 | * | 2 | | 261 | 15 | 1 | 356 |
| Red-bellied Woodpecker | 19 | 51 | 51 | 106 | 59 | 79 | 97 | 75 | 60 | 36 | 5 | 131 | 63 | 21 | 853 |
| Yellow-bld. Sapsucker | | 1 | | | | 2 | 1 | | | | | | | | 4 |
| Downy Woodpecker | 5 | 10 | 8 | 28 | 19 | 31 | 28 | 26 | 17 | 7 | 4 | 21 | 13 | 13 | 230 |
| Hairy Woodpecker | 1 | 2 | 2 | 11 | 9 | 5 | 7 | 7 | 8 | 5 | 1 | 3 | | 1 | 62 |
| Red-ckd Woodpecker | | 7 | | | | | | | | | | 22 | 2 | | 31 |
| Northern Flicker | 19 | 11 | 4 | 36 | 18 | 48 | 25 | 38 | 52 | 17 | 14 | 20 | 2 | 14 | 318 |
| Pileated Woodpecker | 7 | 7 | 4 | 6 | 6 | 9 | 8 | 2 | 4 | 6 | 4 | 26 | 7 | 3 | 99 |
| Eastern Wood-Pewee | 11 | 23 | 12 | 11 | 2 | 29 | 35 | 26 | 23 | 3 | 3 | 33 | 16 | 2 | 229 |
| Acadian Flycatcher | 28 | 11 | 26 | 39 | 4 | 30 | 42 | 7 | 4 | 1 | | 13 | 33 | 6 | 244 |
| Alder Flycatcher | | 1 | | | | | | | | | | | | | 1 |
| Least Flycatcher | | | | | | 1 | | | 1 | | | | | | 2 |
| Eastern Phoebe | 1 | 25 | 23 | 14 | 43 | 49 | 58 | 21 | 22 | 28 | 5 | | | 10 | 299 |
| Great Cr Flycatcher | 36 | 50 | 25 | 48 | 23 | 27 | 58 | 48 | 30 | 10 | | 569 | 55 | 11 | 990 |
| Eastern Kingbird | 9 | 50 | 27 | 42 | 28 | 32 | 61 | 37 | 27 | 34 | 15 | 32 | 43 | 14 | 451 |
| Horned Lark | 3 | | 4 | | | | | 4 | | 2 | | | 2 | 4 | 19 |
| Purple Martin | 40 | 77 | 9 | 26 | 34 | 13 | 53 | 196 | 79 | 144 | 26 | 386 | 58 | 12 | 1153 |
| Tree Swallow | 16 | | 2 | 5 | 6 | 11 | 16 | 5 | | | | 331 | 7 | | 399 |
| Nthn Rough-wdg Swallow | 22 | 22 | 26 | 28 | 25 | 29 | 16 | 36 | 32 | 4 | 8 | 64 | 15 | 10 | 337 |
| Bank Swallow | | | | 1 | | 5 | 9 | | 4 | | 4 | | | | 23 |
| Cliff Swallow | | | | | 15 | | 106 | * | 2 | | 4 | | | | 127 |
| Barn Swallow | 108 | 76 | 47 | 167 | 153 | 85 | 153 | 92 | 82 | 79 | 56 | 484 | 24 | 22 | 1628 |
| Blue Jay | 22 | 47 | 55 | 134 | 124 | 123 | 154 | 163 | 158 | 86 | 38 | 68 | 33 | 111 | 1316 |
| American Crow | 124 | 110 | 42 | 156 | 188 | 180 | 276 | 178 | 157 | 146 | 20 | 114 | 26 | 88 | 1805 |
| Fish Crow | 6 | 47 | 12 | 83 | 26 | 13 | 18 | 1 | 4 | | | 77 | 30 | | 317 |
| Common Raven | | | | | | | | | 4 | | | | | | 4 |
| Carolina Chickadee | 28 | 37 | 36 | 105 | 123 | 154 | 159 | 121 | 95 | 41 | 18 | 64 | 15 | 49 | 1045 |
| Tufted Titmouse | 11 | 63 | 66 | 134 | 144 | 171 | 157 | 102 | 112 | 34 | 10 | 88 | 41 | 49 | 1182 |
| Red-brstd Nuthatch | | | | | 1 | | | | | | | | | | 1 |
| White-brstd Nuthatch | 2 | 5 | 1 | 11 | 7 | 11 | 8 | 14 | 22 | 8 | 2 | 7 | 6 | 1 | 105 |
| Brown-hd Nuthatch | | 12 | 10 | 14 | 23 | 22 | 43 | 15 | 16 | 1 | 2 | 72 | 11 | 3 | 244 |
| Brown Creeper | | | | | | | | | 1 | 2 | | | | | 3 |
| Carolina Wren | 25 | 76 | 87 | 160 | 113 | 228 | 184 | 117 | 91 | 47 | 4 | 149 | 70 | 26 | 1377 |
| House Wren | | | | 10 | 12 | 9 | 3 | 4 | 37 | 9 | 3 | | 1 | | 88 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Winter Wren | | | | | | | | | | | 1 | | | | 1 |
| Sedge Wren | | | | 4 | | | | | | | | | | | 4 |
| Marsh Wren | | | | | | | | | | | | 6 | | | 6 |
| Golden-crd Kinglet | | | | | | | | | * | 1 | | | | | 1 |
| Ruby-crd Kinglet | | | | 2 | 16 | 1 | 4 | 1 | | 1 | | | | * | 25 |
| B-g. Gnatchatcher | 40 | 36 | 80 | 153 | 233 | 157 | 229 | 29 | 46 | 18 | 4 | 111 | 35 | 20 | 1191 |
| Eastern Bluebird | 34 | 90 | 113 | 61 | 122 | 127 | 192 | 144 | 111 | 121 | 27 | 143 | 20 | 80 | 1385 |
| Veery | | | | 1 | | 1 | | 12 | 5 | | 1 | | | | 20 |
| Gray-cheek Thrush | | | | 1 | | | | | * | | | | | | 1 |
| Swainson's Thrush | | | | 2 | 1 | 6 | | 23 | 65 | 4 | | | | | 101 |
| Hermit Thrush | | 2 | | | 1 | | | | * | 1 | | 1 | | * | 5 |
| Wood Thrush | 36 | 32 | 53 | 73 | 33 | 60 | 90 | 69 | 54 | 29 | 2 | 7 | 22 | 5 | 565 |
| American Robin | 49 | 151 | 118 | 310 | 301 | 289 | 130 | 741 | 740 | 322 | 123 | 8 | 8 | 196 | 3486 |
| Gray Catbird | 7 | 37 | 9 | 52 | 19 | 32 | 13 | 104 | 91 | 16 | 12 | 22 | 7 | 6 | 427 |
| No. Mockingbird | 34 | 106 | 135 | 104 | 73 | 101 | 82 | 179 | 137 | 119 | 37 | 242 | 71 | 109 | 1529 |
| Brown Thrasher | 19 | 34 | 19 | 52 | 25 | 40 | 26 | 43 | 48 | 38 | 15 | 45 | 9 | 43 | 456 |
| American Pipit | 1 | | 1 | 1 | | | | | | | | | | | 3 |
| Cedar Waxwing | 12 | 1 | 33 | 157 | 82 | 88 | 32 | 151 | 181 | 266 | 65 | 9 | 37 | | 1114 |
| Loggerhead Shrike | 4 | 9 | 14 | 2 | 1 | | | | | 1 | | 37 | 24 | | 92 |
| European Starling | 236 | 132 | 107 | 200 | 255 | 322 | 99 | 499 | 912 | 313 | 119 | 96 | 28 | 196 | 3514 |
| White-eyed Vireo | 19 | 11 | 23 | 50 | 64 | 28 | 52 | 10 | 8 | 2 | | 79 | 44 | 2 | 392 |
| Solitary Vireo | | 1 | | | 4 | 3 | 4 | 3 | 1 | | | | | | 16 |
| Yellow-thd Vireo | 3 | 8 | 5 | 16 | 14 | 15 | 21 | 1 | 5 | 1 | | 23 | 3 | | 115 |
| Warbling Vireo | | | | | | | | | 1 | | | | | | 1 |
| Red-eyed Vireo | 24 | 32 | 72 | 176 | 181 | 149 | 291 | 113 | 95 | 46 | 2 | 88 | 39 | 26 | 1334 |
| Blue-winged Warbler | | | | 1 | 7 | | | 2 | 2 | | | | | | 12 |
| Golden-wngd Warbler | | | | | | | | | 1 | | | | | | 1 |
| Nashville Warbler | | | | | | | | | 2 | | | | | | 2 |
| Northern Parula | 9 | 6 | 49 | 57 | 37 | 53 | 94 | 29 | 52 | 8 | | 43 | 64 | 2 | 503 |
| Yellow Warbler | | 1 | 1 | 5 | 1 | 3 | 2 | 12 | 30 | 4 | 3 | | | | 62 |
| Chestnut-sided Warbler | | | | 3 | | | 2 | 12 | 18 | 1 | | | | | 36 |
| Magnolia Warbler | | | | | | 2 | | 4 | 12 | | | | | | 18 |
| Cape May Warbler | | | | 1 | | 1 | | 20 | 35 | 15 | 1 | 3 | | | 76 |
| Bl-thd Blue Warbler | 1 | 3 | 6 | 47 | 12 | 17 | 36 | 52 | 46 | 5 | | 2 | | | 227 |
| Yellow-rmpd Warbler | 11 | 7 | 18 | 102 | 310 | 56 | 39 | 86 | 133 | 90 | * | 5 | | | 857 |
| Bl-thd Green Warbler | | | | | 1 | | 2 | 2 | 5 | | 1 | 1 | | | 12 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blackburian Warbler | | | | | | | | 1 | 1 | | | | | | 2 |
| Yellow-thd Warbler | 22 | 9 | 16 | 39 | 43 | 14 | 93 | | 2 | | | 53 | 13 | 4 | 308 |
| Pine Warbler | 8 | 32 | 47 | 66 | 63 | 75 | 121 | 28 | 13 | 3 | 2 | 82 | 31 | 11 | 582 |
| Prarie Warbler | 9 | 5 | 26 | 5 | 39 | 30 | 64 | 4 | 3 | 1 | | 204 | 8 | 2 | 400 |
| Palm Warbler | | | | | 12 | | | | 1 | | 1 | | | | 14 |
| Bay-breasted Warbler | | | | | | | | 1 | 1 | | | | | | 2 |
| Blackpoll Warbler | | | | 2 | | 2 | 3 | 16 | 16 | 2 | 2 | 3 | | | 46 |
| Cerulean Warbler | | | | 1 | | | | | * | 3 | | | | | 4 |
| Bl and wh Warbler | 3 | 5 | 10 | 20 | 24 | 24 | 10 | 9 | 16 | 2 | | 4 | 2 | 1 | 130 |
| American Redstart | | 6 | 14 | 6 | 20 | 40 | 49 | 63 | 53 | 7 | 1 | | 11 | 4 | 274 |
| Prothonotary Warbler | 48 | 5 | 6 | 31 | 11 | 17 | 20 | 2 | 7 | 1 | | 172 | 27 | | 347 |
| Worm-eating Warbler | 5 | | 4 | 5 | 5 | | | 4 | 1 | 1 | 1 | 1 | | | 27 |
| Swainson's Warbler | * | | 1 | | | | | | | | | 1 | 1 | | 3 |
| Ovenbird | 13 | 15 | 40 | 60 | 34 | 41 | 125 | 40 | 21 | 1 | | | | | 390 |
| Northern Waterthrush | | | | 2 | 2 | 1 | 2 | 4 | 4 | | | | | | 15 |
| Louisiana Waterthrush | 4 | | 6 | 6 | 6 | 17 | 5 | 1 | 2 | | | | 1 | 5 | 53 |
| Kentucky Warbler | 6 | 1 | 5 | 9 | 6 | 11 | 3 | 1 | 1 | | | 11 | 12 | | 66 |
| Common Yellowthroat | 23 | 21 | 33 | 82 | 85 | 65 | 88 | 53 | 53 | 13 | 3 | 244 | 28 | 1 | 792 |
| Hooded Warbler | 6 | 4 | 17 | 4 | 24 | 25 | 32 | 2 | 1 | | | 86 | 29 | | 230 |
| Wilson's Warbler | | | | | | 1 | | | | | | | | | 1 |
| Canada Warbler | | | | | | 1 | | 2 | 3 | | | | | 1 | 7 |
| Yellow-brstd Chat | 15 | 5 | 17 | 28 | 5 | 35 | 63 | 26 | 3 | 16 | | 131 | 19 | 6 | 369 |
| Summer Tanager | 10 | 35 | 59 | 69 | 6 | 46 | 140 | 4 | 1 | 1 | | 138 | 38 | 10 | 557 |
| Scarlet Tanager | 1 | 1 | 13 | 23 | 15 | 31 | 49 | 28 | 19 | 2 | * | 2 | 1 | 1 | 186 |
| Western Tanager | | | | | | | 1 | | | | | | | | 1 |
| Northern Cardinal | 43 | 107 | 74 | 246 | 215 | 362 | 282 | 249 | 306 | 146 | 39 | 370 | 115 | 85 | 2639 |
| Rose-brstd Grosbeak | | | * | 9 | 1 | 3 | 4 | 16 | 17 | 4 | | 1 | | 2 | 57 |
| Blue Grosbeak | 21 | 12 | 20 | 25 | 10 | 35 | 60 | 4 | 17 | 19 | 2 | 95 | 29 | 3 | 352 |
| Indigo Bunting | 36 | 18 | 44 | 86 | 23 | 139 | 149 | 108 | 73 | 74 | 13 | 268 | 39 | 24 | 1094 |
| Painted Bunting | | | | | | | | | | | | 32 | 11 | | 43 |
| Rufous-sided Towhee | 14 | 43 | 32 | 96 | 99 | 113 | 113 | 85 | 69 | 24 | 5 | 470 | 39 | 42 | 1244 |
| Bachman's Sparrow | | 2 | | | | | 6 | | | | | 20 | | | 28 |
| Chipping Sparrow | 10 | 54 | 51 | 38 | 128 | 87 | 101 | 57 | 28 | 39 | 2 | 4 | 7 | 23 | 629 |
| Field Sparrow | 23 | 15 | 37 | 54 | 83 | 25 | 49 | 38 | 7 | 39 | 3 | | 24 | 32 | 429 |
| Vesper Sparrow | | | | | | | | | | | * | | | | 0 |
| Savannah Sparrow | 16 | 1 | 2 | 13 | 22 | 4 | 6 | 2 | 6 | 1 | | 6 | | | 79 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Winter Wren | | | | | | | | | | | 1 | | | | 1 |
| Sedge Wren | | | | 4 | | | | | | | | | | | 4 |
| Marsh Wren | | | | | | | | | | | | 6 | | | 6 |
| Golden-crd Kinglet | | | | | | | | | * | 1 | | | | | 1 |
| Ruby-crd Kinglet | | | | 2 | 16 | 1 | 4 | 1 | | 1 | | | | * | 25 |
| B-g. Gnatchatcher | 40 | 36 | 80 | 153 | 233 | 157 | 229 | 29 | 46 | 18 | 4 | 111 | 35 | 20 | 1191 |
| Eastern Bluebird | 34 | 90 | 113 | 61 | 122 | 127 | 192 | 144 | 111 | 121 | 27 | 143 | 20 | 80 | 1385 |
| Veery | | | | 1 | | 1 | | 12 | 5 | | 1 | | | | 20 |
| Gray-cheek Thrush | | | | 1 | | | | | * | | | | | | 1 |
| Swainson's Thrush | | | | 2 | 1 | 6 | | 23 | 65 | 4 | | | | | 101 |
| Hermit Thrush | | 2 | | | 1 | | | | * | 1 | | 1 | | * | 5 |
| Wood Thrush | 36 | 32 | 53 | 73 | 33 | 60 | 90 | 69 | 54 | 29 | 2 | 7 | 22 | 5 | 565 |
| American Robin | 49 | 151 | 118 | 310 | 301 | 289 | 130 | 741 | 740 | 322 | 123 | 8 | 8 | 196 | 3486 |
| Gray Catbird | 7 | 37 | 9 | 52 | 19 | 32 | 13 | 104 | 91 | 16 | 12 | 22 | 7 | 6 | 427 |
| No. Mockingbird | 34 | 106 | 135 | 104 | 73 | 101 | 82 | 179 | 137 | 119 | 37 | 242 | 71 | 109 | 1529 |
| Brown Thrasher | 19 | 34 | 19 | 52 | 25 | 40 | 26 | 43 | 48 | 38 | 15 | 45 | 9 | 43 | 456 |
| American Pipit | 1 | | 1 | 1 | | | | | | | | | | | 3 |
| Cedar Waxwing | 12 | 1 | 33 | 157 | 82 | 88 | 32 | 151 | 181 | 266 | 65 | 9 | 37 | | 1114 |
| Loggerhead Shrike | 4 | 9 | 14 | 2 | 1 | | | | | 1 | | 37 | 24 | | 92 |
| European Starling | 236 | 132 | 107 | 200 | 255 | 322 | 99 | 499 | 912 | 313 | 119 | 96 | 28 | 196 | 3514 |
| White-eyed Vireo | 19 | 11 | 23 | 50 | 64 | 28 | 52 | 10 | 8 | 2 | | 79 | 44 | 2 | 392 |
| Solitary Vireo | | 1 | | | 4 | 3 | 4 | 3 | 1 | | | | | | 16 |
| Yellow-thd Vireo | 3 | 8 | 5 | 16 | 14 | 15 | 21 | 1 | 5 | 1 | | 23 | 3 | | 115 |
| Warbling Vireo | | | | | | | | | 1 | | | | | | 1 |
| Red-eyed Vireo | 24 | 32 | 72 | 176 | 181 | 149 | 291 | 113 | 95 | 46 | 2 | 88 | 39 | 26 | 1334 |
| Blue-winged Warbler | | | | 1 | 7 | | | 2 | 2 | | | | | | 12 |
| Golden-wngd Warbler | | | | | | | | | 1 | | | | | | 1 |
| Nashville Warbler | | | | | | | | | 2 | | | | | | 2 |
| Northern Parula | 9 | 6 | 49 | 57 | 37 | 53 | 94 | 29 | 52 | 8 | | 43 | 64 | 2 | 503 |
| Yellow Warbler | | 1 | 1 | 5 | 1 | 3 | 2 | 12 | 30 | 4 | 3 | | | | 62 |
| Chestnut-sided Warbler | | | | 3 | | | 2 | 12 | 18 | 1 | | | | | 36 |
| Magnolia Warbler | | | | | | 2 | | 4 | 12 | | | | | | 18 |
| Cape May Warbler | | | | 1 | | 1 | | 20 | 35 | 15 | 1 | 3 | | | 76 |
| Bl-thd Blue Warbler | 1 | 3 | 6 | 47 | 12 | 17 | 36 | 52 | 46 | 5 | | 2 | | | 227 |
| Yellow-rmpd Warbler | 11 | 7 | 18 | 102 | 310 | 56 | 39 | 86 | 133 | 90 | * | 5 | | | 857 |
| Bl-thd Green Warbler | | | | | 1 | | 2 | 2 | 5 | | 1 | 1 | | | 12 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blackburian Warbler | | | | | | | | 1 | 1 | | | | | | 2 |
| Yellow-thd Warbler | 22 | 9 | 16 | 39 | 43 | 14 | 93 | | 2 | | | 53 | 13 | 4 | 308 |
| Pine Warbler | 8 | 32 | 47 | 66 | 63 | 75 | 121 | 28 | 13 | 3 | 2 | 82 | 31 | 11 | 582 |
| Prarie Warbler | 9 | 5 | 26 | 5 | 39 | 30 | 64 | 4 | 3 | 1 | | 204 | 8 | 2 | 400 |
| Palm Warbler | | | | | 12 | | | | 1 | | 1 | | | | 14 |
| Bay-breasted Warbler | | | | | | | | 1 | 1 | | | | | | 2 |
| Blackpoll Warbler | | | | 2 | | 2 | 3 | 16 | 16 | 2 | 2 | 3 | | | 46 |
| Cerulean Warbler | | | | 1 | | | | | * | 3 | | | | | 4 |
| Bl and wh Warbler | 3 | 5 | 10 | 20 | 24 | 24 | 10 | 9 | 16 | 2 | | 4 | 2 | 1 | 130 |
| American Redstart | | 6 | 14 | 6 | 20 | 40 | 49 | 63 | 53 | 7 | 1 | | 11 | 4 | 274 |
| Prothonotary Warbler | 48 | 5 | 6 | 31 | 11 | 17 | 20 | 2 | 7 | 1 | | 172 | 27 | | 347 |
| Worm-eating Warbler | 5 | | 4 | 5 | 5 | | | 4 | 1 | 1 | 1 | 1 | | | 27 |
| Swainson's Warbler | * | | 1 | | | | | | | | | 1 | 1 | | 3 |
| Ovenbird | 13 | 15 | 40 | 60 | 34 | 41 | 125 | 40 | 21 | 1 | | | | | 390 |
| Northern Waterthrush | | | | 2 | 2 | 1 | 2 | 4 | 4 | | | | | | 15 |
| Louisiana Waterthrush | 4 | | 6 | 6 | 6 | 17 | 5 | 1 | 2 | | | | 1 | 5 | 53 |
| Kentucky Warbler | 6 | 1 | 5 | 9 | 6 | 11 | 3 | 1 | 1 | | | 11 | 12 | | 66 |
| Common Yellowthroat | 23 | 21 | 33 | 82 | 85 | 65 | 88 | 53 | 53 | 13 | 3 | 244 | 28 | 1 | 792 |
| Hooded Warbler | 6 | 4 | 17 | 4 | 24 | 25 | 32 | 2 | 1 | | | 86 | 29 | | 230 |
| Wilson's Warbler | | | | | | 1 | | | | | | | | | 1 |
| Canada Warbler | | | | | | 1 | | 2 | 3 | | | | | 1 | 7 |
| Yellow-brstd Chat | 15 | 5 | 17 | 28 | 5 | 35 | 63 | 26 | 3 | 16 | | 131 | 19 | 6 | 369 |
| Summer Tanager | 10 | 35 | 59 | 69 | 6 | 46 | 140 | 4 | 1 | 1 | | 138 | 38 | 10 | 557 |
| Scarlet Tanager | 1 | 1 | 13 | 23 | 15 | 31 | 49 | 28 | 19 | 2 | * | 2 | 1 | 1 | 186 |
| Western Tanager | | | | | | | 1 | | | | | | | | 1 |
| Northern Cardinal | 43 | 107 | 74 | 246 | 215 | 362 | 282 | 249 | 306 | 146 | 39 | 370 | 115 | 85 | 2639 |
| Rose-brstd Grosbeak | | | * | 9 | 1 | 3 | 4 | 16 | 17 | 4 | | 1 | | 2 | 57 |
| Blue Grosbeak | 21 | 12 | 20 | 25 | 10 | 35 | 60 | 4 | 17 | 19 | 2 | 95 | 29 | 3 | 352 |
| Indigo Bunting | 36 | 18 | 44 | 86 | 23 | 139 | 149 | 108 | 73 | 74 | 13 | 268 | 39 | 24 | 1094 |
| Painted Bunting | | | | | | | | | | | | 32 | 11 | | 43 |
| Rufous-sided Towhee | 14 | 43 | 32 | 96 | 99 | 113 | 113 | 85 | 69 | 24 | 5 | 470 | 39 | 42 | 1244 |
| Bachman's Sparrow | | 2 | | | | | 6 | | | | | 20 | | | 28 |
| Chipping Sparrow | 10 | 54 | 51 | 38 | 128 | 87 | 101 | 57 | 28 | 39 | 2 | 4 | 7 | 23 | 629 |
| Field Sparrow | 23 | 15 | 37 | 54 | 83 | 25 | 49 | 38 | 7 | 39 | 3 | | 24 | 32 | 429 |
| Vesper Sparrow | | | | | | | | | | | * | | | | 0 |
| Savannah Sparrow | 16 | 1 | 2 | 13 | 22 | 4 | 6 | 2 | 6 | 1 | | 6 | | | 79 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Winter Wren | | | | | | | | | | | 1 | | | | 1 |
| Sedge Wren | | | | 4 | | | | | | | | | | | 4 |
| Marsh Wren | | | | | | | | | | | | 6 | | | 6 |
| Golden-crd Kinglet | | | | | | | | | * | 1 | | | | | 1 |
| Ruby-crd Kinglet | | | | 2 | 16 | 1 | 4 | 1 | | 1 | | | | * | 25 |
| B-g. Gnatchatcher | 40 | 36 | 80 | 153 | 233 | 157 | 229 | 29 | 46 | 18 | 4 | 111 | 35 | 20 | 1191 |
| Eastern Bluebird | 34 | 90 | 113 | 61 | 122 | 127 | 192 | 144 | 111 | 121 | 27 | 143 | 20 | 80 | 1385 |
| Veery | | | | 1 | | 1 | | 12 | 5 | | 1 | | | | 20 |
| Gray-cheek Thrush | | | | 1 | | | | | * | | | | | | 1 |
| Swainson's Thrush | | | | 2 | 1 | 6 | | 23 | 65 | 4 | | | | | 101 |
| Hermit Thrush | | 2 | | | 1 | | | | * | 1 | | 1 | | * | 5 |
| Wood Thrush | 36 | 32 | 53 | 73 | 33 | 60 | 90 | 69 | 54 | 29 | 2 | 7 | 22 | 5 | 565 |
| American Robin | 49 | 151 | 118 | 310 | 301 | 289 | 130 | 741 | 740 | 322 | 123 | 8 | 8 | 196 | 3486 |
| Gray Catbird | 7 | 37 | 9 | 52 | 19 | 32 | 13 | 104 | 91 | 16 | 12 | 22 | 7 | 6 | 427 |
| No. Mockingbird | 34 | 106 | 135 | 104 | 73 | 101 | 82 | 179 | 137 | 119 | 37 | 242 | 71 | 109 | 1529 |
| Brown Thrasher | 19 | 34 | 19 | 52 | 25 | 40 | 26 | 43 | 48 | 38 | 15 | 45 | 9 | 43 | 456 |
| American Pipit | 1 | | 1 | 1 | | | | | | | | | | | 3 |
| Cedar Waxwing | 12 | 1 | 33 | 157 | 82 | 88 | 32 | 151 | 181 | 266 | 65 | 9 | 37 | | 1114 |
| Loggerhead Shrike | 4 | 9 | 14 | 2 | 1 | | | | | 1 | | 37 | 24 | | 92 |
| European Starling | 236 | 132 | 107 | 200 | 255 | 322 | 99 | 499 | 912 | 313 | 119 | 96 | 28 | 196 | 3514 |
| White-eyed Vireo | 19 | 11 | 23 | 50 | 64 | 28 | 52 | 10 | 8 | 2 | | 79 | 44 | 2 | 392 |
| Solitary Vireo | | 1 | | | 4 | 3 | 4 | 3 | 1 | | | | | | 16 |
| Yellow-thd Vireo | 3 | 8 | 5 | 16 | 14 | 15 | 21 | 1 | 5 | 1 | | 23 | 3 | | 115 |
| Warbling Vireo | | | | | | | | | 1 | | | | | | 1 |
| Red-eyed Vireo | 24 | 32 | 72 | 176 | 181 | 149 | 291 | 113 | 95 | 46 | 2 | 88 | 39 | 26 | 1334 |
| Blue-winged Warbler | | | | 1 | 7 | | | 2 | 2 | | | | | | 12 |
| Golden-wngd Warbler | | | | | | | | | 1 | | | | | | 1 |
| Nashville Warbler | | | | | | | | | 2 | | | | | | 2 |
| Northern Parula | 9 | 6 | 49 | 57 | 37 | 53 | 94 | 29 | 52 | 8 | | 43 | 64 | 2 | 503 |
| Yellow Warbler | | 1 | 1 | 5 | 1 | 3 | 2 | 12 | 30 | 4 | 3 | | | | 62 |
| Chestnut-sided Warbler | | | | 3 | | | 2 | 12 | 18 | 1 | | | | | 36 |
| Magnolia Warbler | | | | | | 2 | | 4 | 12 | | | | | | 18 |
| Cape May Warbler | | | | 1 | | 1 | | 20 | 35 | 15 | 1 | 3 | | | 76 |
| Bl-thd Blue Warbler | 1 | 3 | 6 | 47 | 12 | 17 | 36 | 52 | 46 | 5 | | 2 | | | 227 |
| Yellow-rmpd Warbler | 11 | 7 | 18 | 102 | 310 | 56 | 39 | 86 | 133 | 90 | * | 5 | | | 857 |
| Bl-thd Green Warbler | | | | | 1 | | 2 | 2 | 5 | | 1 | 1 | | | 12 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blackburian Warbler | | | | | | | | 1 | 1 | | | | | | 2 |
| Yellow-thd Warbler | 22 | 9 | 16 | 39 | 43 | 14 | 93 | | 2 | | | 53 | 13 | 4 | 308 |
| Pine Warbler | 8 | 32 | 47 | 66 | 63 | 75 | 121 | 28 | 13 | 3 | 2 | 82 | 31 | 11 | 582 |
| Prarie Warbler | 9 | 5 | 26 | 5 | 39 | 30 | 64 | 4 | 3 | 1 | | 204 | 8 | 2 | 400 |
| Palm Warbler | | | | | 12 | | | | 1 | | 1 | | | | 14 |
| Bay-breasted Warbler | | | | | | | | 1 | 1 | | | | | | 2 |
| Blackpoll Warbler | | | | 2 | | 2 | 3 | 16 | 16 | 2 | 2 | 3 | | | 46 |
| Cerulean Warbler | | | | 1 | | | | | * | 3 | | | | | 4 |
| Bl and wh Warbler | 3 | 5 | 10 | 20 | 24 | 24 | 10 | 9 | 16 | 2 | | 4 | 2 | 1 | 130 |
| American Redstart | | 6 | 14 | 6 | 20 | 40 | 49 | 63 | 53 | 7 | 1 | | 11 | 4 | 274 |
| Prothonotary Warbler | 48 | 5 | 6 | 31 | 11 | 17 | 20 | 2 | 7 | 1 | | 172 | 27 | | 347 |
| Worm-eating Warbler | 5 | | 4 | 5 | 5 | | | 4 | 1 | 1 | 1 | 1 | | | 27 |
| Swainson's Warbler | * | | 1 | | | | | | | | | 1 | 1 | | 3 |
| Ovenbird | 13 | 15 | 40 | 60 | 34 | 41 | 125 | 40 | 21 | 1 | | | | | 390 |
| Northern Waterthrush | | | | 2 | 2 | 1 | 2 | 4 | 4 | | | | | | 15 |
| Louisiana Waterthrush | 4 | | 6 | 6 | 6 | 17 | 5 | 1 | 2 | | | | 1 | 5 | 53 |
| Kentucky Warbler | 6 | 1 | 5 | 9 | 6 | 11 | 3 | 1 | 1 | | | 11 | 12 | | 66 |
| Common Yellowthroat | 23 | 21 | 33 | 82 | 85 | 65 | 88 | 53 | 53 | 13 | 3 | 244 | 28 | 1 | 792 |
| Hooded Warbler | 6 | 4 | 17 | 4 | 24 | 25 | 32 | 2 | 1 | | | 86 | 29 | | 230 |
| Wilson's Warbler | | | | | | 1 | | | | | | | | | 1 |
| Canada Warbler | | | | | | 1 | | 2 | 3 | | | | | 1 | 7 |
| Yellow-brstd Chat | 15 | 5 | 17 | 28 | 5 | 35 | 63 | 26 | 3 | 16 | | 131 | 19 | 6 | 369 |
| Summer Tanager | 10 | 35 | 59 | 69 | 6 | 46 | 140 | 4 | 1 | 1 | | 138 | 38 | 10 | 557 |
| Scarlet Tanager | 1 | 1 | 13 | 23 | 15 | 31 | 49 | 28 | 19 | 2 | * | 2 | 1 | 1 | 186 |
| Western Tanager | | | | | | | 1 | | | | | | | | 1 |
| Northern Cardinal | 43 | 107 | 74 | 246 | 215 | 362 | 282 | 249 | 306 | 146 | 39 | 370 | 115 | 85 | 2639 |
| Rose-brstd Grosbeak | | | * | 9 | 1 | 3 | 4 | 16 | 17 | 4 | | 1 | | 2 | 57 |
| Blue Grosbeak | 21 | 12 | 20 | 25 | 10 | 35 | 60 | 4 | 17 | 19 | 2 | 95 | 29 | 3 | 352 |
| Indigo Bunting | 36 | 18 | 44 | 86 | 23 | 139 | 149 | 108 | 73 | 74 | 13 | 268 | 39 | 24 | 1094 |
| Painted Bunting | | | | | | | | | | | | 32 | 11 | | 43 |
| Rufous-sided Towhee | 14 | 43 | 32 | 96 | 99 | 113 | 113 | 85 | 69 | 24 | 5 | 470 | 39 | 42 | 1244 |
| Bachman's Sparrow | | 2 | | | | | 6 | | | | | 20 | | | 28 |
| Chipping Sparrow | 10 | 54 | 51 | 38 | 128 | 87 | 101 | 57 | 28 | 39 | 2 | 4 | 7 | 23 | 629 |
| Field Sparrow | 23 | 15 | 37 | 54 | 83 | 25 | 49 | 38 | 7 | 39 | 3 | | 24 | 32 | 429 |
| Vesper Sparrow | | | | | | | | | | | * | | | | 0 |
| Savannah Sparrow | 16 | 1 | 2 | 13 | 22 | 4 | 6 | 2 | 6 | 1 | | 6 | | | 79 |

| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grasshopper Sparrow | 21 | | 8 | 2 | 16 | 5 | | 6 | 5 | 28 | | | | 1 | 92 |
| Henslow's Sparrow | 1 | | | | | | | | | | | | | | 1 |
| Fox Sparrow | | | | | | | | | 1 | | | | | | 1 |
| Song Sparrow | | 3 | | 6 | 18 | 1 | 2 | 59 | 56 | 21 | 11 | 1 | | 6 | 184 |
| Swamp Sparrow | | | | | 9 | 2 | 2 | | | 2 | * | | | | 15 |
| White-th Sparrow | 1 | 2 | 15 | 2 | 172 | 10 | 8 | 18 | 33 | 6 | | | 5 | | 272 |
| White-cr Sparrow | | | | 35 | | | | | | | | | | | 35 |
| Sparrow sp. | | | | | | | 1 | | | | | | | | 1 |
| Dark-eyed Junco | | 3 | | | | | | | | | | | | | 3 |
| Bobolink | 6 | 25 | 3 | 50 | | 100 | | 1 | 13 | 725 | | 8 | 260 | | 1191 |
| Red-wngd Blackbird | 133 | 61 | 70 | 144 | 136 | 104 | 154 | 79 | 149 | 54 | 18 | 592 | 116 | 30 | 1840 |
| Eastern Meadowlark | 82 | 19 | 49 | 79 | 59 | 35 | 83 | 46 | 31 | 118 | 13 | 5 | 25 | 26 | 670 |
| Boat-tailed Grackle | | | | | | | | | | | | 381 | | | 381 |
| Common Grackle | 158 | 142 | 101 | 344 | 332 | 408 | 275 | 461 | 398 | 335 | 110 | 210 | 222 | 217 | 3713 |
| Brown-hd Cowbird | 43 | 36 | 47 | 93 | 97 | 96 | 117 | 55 | 65 | 27 | 11 | 167 | 48 | 5 | 907 |
| Rusty Blackbird | | | | 4 | | | 6 | 2 | | | 2 | | | | 14 |
| Brewer's Blackbird | | | | | | | | | | | | | | 2 | 2 |
| Orchard Oriole | 12 | 7 | 25 | 41 | 22 | 13 | 42 | 7 | 5 | 4 | | 379 | 44 | 5 | 606 |
| Northern Oriole | 1 | 5 | 2 | 5 | | 1 | 1 | 19 | 51 | 4 | | 2 | | 1 | 92 |
| Purple Finch | | | | | | 10 | | 4 | * | | | | | | 14 |
| House Finch | 24 | 53 | 20 | 161 | 117 | 112 | 55 | 123 | 166 | 61 | 18 | | 1 | 54 | 965 |
| Pine Siskin | | 2 | 2 | * | 27 | 10 | 17 | | | | | | | | 58 |
| American Goldfinch | 6 | 53 | 22 | 277 | 205 | 188 | 161 | 312 | 159 | 98 | 38 | | 8 | 21 | 1548 |
| Evening Grosbeak | | | | | * | | 8 | | * | | | | | | 8 |
| House Sparrow | 23 | 17 | 24 | 57 | 65 | 59 | 51 | 64 | 43 | 27 | 4 | 11 | 24 | 4 | 473 |
| No. of Species | 111 | 112 | 112 | 134 | 126 | 124 | 126 | 134 | 130 | 114 | 82 | 160 | 101 | 89 | 1655 |
| No. of Individuals | 2490 | 2877 | 2998 | 6707 | 6523 | 6454 | 7590 | 7033 | 7136 | 4627 | 1213 | 14317 | 2760 | 2211 | 74936 |
| Total Field Hours | 21.5 | 70.5 | 55.5 | 103 | 86.75 | 139 | 134.5 | 98.25 | 119.5 | 40 | 128 | 80.5 | 24.5 | 50.5 | 1152 |
| Hours on foot | 18 | 40 | 33.5 | 93 | 68 | 91 | 107.25 | 64.75 | 108.5 | 22 | 122 | 40.5 | 17 | 32 | 857.5 |
| Hours by car | 3.5 | 29 | 22 | 10 | 18.75 | 48 | 20.75 | 33.5 | 11 | 18 | 6 | 34.75 | 7.5 | 16 | 278.75 |
| Hours Owling | 2.25 | 1.5 | 0.5 | 2 | 4 | | 4.5 | 3 | 2 | 0 | 0 | 4.5 | 1 | 1 | 26.25 |
| Total Field miles | 115 | 308.5 | 287.5 | 194 | 340.5 | 391 | 265 | 444.5 | 173 | 235 | 134 | 321.05 | 118.5 | 285.5 | 3613.1 |
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| Miles by car | 105 | 289 | 263 | 127 | 284.5 | 315 | 190.25 | 408 | 114 | 213 | 125 | 263.3 | 101 | 252.5 | 3050.6 |
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| Date | 1-May | 1-May | 30-Apr | 30-Apr | 24-Apr | 8-May | 1-May | 7-May | 7-May | 1-May | 14-May | 1-May | 30-Apr | 14-May | |

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| Species | GVNC | SPNC | RVNC | RANC | DUNC | CPNC | JLNC | GRNC | WSNC | ICNC | LENC | CHSC | CGSC | SPSC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grasshopper Sparrow | 21 | | 8 | 2 | 16 | 5 | | 6 | 5 | 28 | | | | 1 | 92 |
| Henslow's Sparrow | 1 | | | | | | | | | | | | | | 1 |
| Fox Sparrow | | | | | | | | | 1 | | | | | | 1 |
| Song Sparrow | | 3 | | 6 | 18 | 1 | 2 | 59 | 56 | 21 | 11 | 1 | | 6 | 184 |
| Swamp Sparrow | | | | | 9 | 2 | 2 | | | 2 | * | | | | 15 |
| White-th Sparrow | 1 | 2 | 15 | 2 | 172 | 10 | 8 | 18 | 33 | 6 | | | 5 | | 272 |
| White-cr Sparrow | | | | 35 | | | | | | | | | | | 35 |
| Sparrow sp. | | | | | | | 1 | | | | | | | | 1 |
| Dark-eyed Junco | | 3 | | | | | | | | | | | | | 3 |
| Bobolink | 6 | 25 | 3 | 50 | | 100 | | 1 | 13 | 725 | | 8 | 260 | | 1191 |
| Red-wngd Blackbird | 133 | 61 | 70 | 144 | 136 | 104 | 154 | 79 | 149 | 54 | 18 | 592 | 116 | 30 | 1840 |
| Eastern Meadowlark | 82 | 19 | 49 | 79 | 59 | 35 | 83 | 46 | 31 | 118 | 13 | 5 | 25 | 26 | 670 |
| Boat-tailed Grackle | | | | | | | | | | | | 381 | | | 381 |
| Common Grackle | 158 | 142 | 101 | 344 | 332 | 408 | 275 | 461 | 398 | 335 | 110 | 210 | 222 | 217 | 3713 |
| Brown-hd Cowbird | 43 | 36 | 47 | 93 | 97 | 96 | 117 | 55 | 65 | 27 | 11 | 167 | 48 | 5 | 907 |
| Rusty Blackbird | | | | 4 | | | 6 | 2 | | | 2 | | | | 14 |
| Brewer's Blackbird | | | | | | | | | | | | | | 2 | 2 |
| Orchard Oriole | 12 | 7 | 25 | 41 | 22 | 13 | 42 | 7 | 5 | 4 | | 379 | 44 | 5 | 606 |
| Northern Oriole | 1 | 5 | 2 | 5 | | 1 | 1 | 19 | 51 | 4 | | 2 | | 1 | 92 |
| Purple Finch | | | | | | 10 | | 4 | * | | | | | | 14 |
| House Finch | 24 | 53 | 20 | 161 | 117 | 112 | 55 | 123 | 166 | 61 | 18 | | 1 | 54 | 965 |
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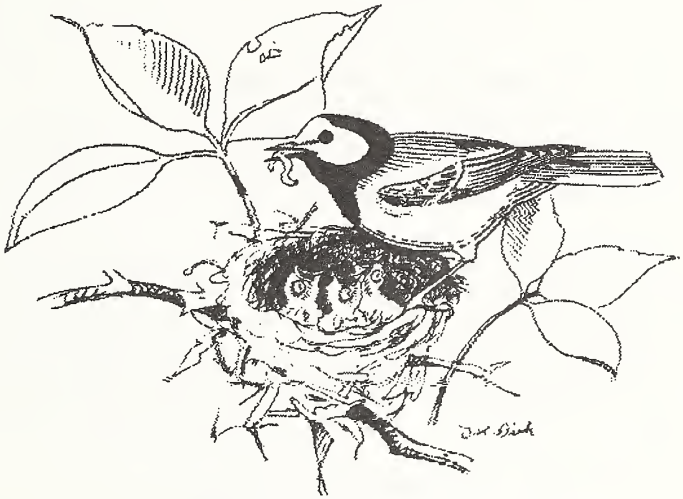
**CGSC**-CONGAREE SWAMP NATIONAL PARK, SC. Center Congaree River, 100 meters west of confluence of Bates Mill Creek. May 30, 7:00 a.m. to 9:30 p.m. Temp. 50°F to 85°, no precipitation, wind 0-10 W m.p.h. Sky conditiion clear to partly cloudy.

**Participants**: Compiler-Robin M. Carter, 4165 E. Buchanan Drive. Columbia, SC 29206; Phyllis Beasley, Caroline Eastmen. Henry Fuseler, James Glather, Jerry Griggs, Malia Griggs, Nancy Lyman, George McCoy, Bruce Smart, Donna Smart, Glenn Smith, Roger Smith, Gary Sowell, Jack Stewart, Lula Stewart.



# General Field Notes

**LYNN MOSELEY**
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Greensboro, NC 27410

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South Carolina Editor
Department of Biology
The Citadel
Charleston, SC 29409

**NOTICE**

Publication of any unusual sightings of birds in the Field Notes or Briefs for the Files does not imply that these reports have been accepted into the official Checklist of Birds records for either North or South Carolina. Decisions regarding the official Checklists are made by the respective State Records Commeittees and will be reported upon periodically in THE CHAT.

## Mew Gull at Cape Hatteras, North Carolina

STEPHEN J. DINSMORE
4024 Arkansas Drive
Ames, IA 50014

JOHN O. FUSSELL
1412 Shepard Street
Morehead City, NC 28557

JEREMY NANCE
3259 N 1st Avenue
Tucson, AZ 85719

At 0715 h on 19 February 1993 we observed an adult Mew Gull (*Larus canus canus*) at Cape Hatteras Point, Dare County. Nance initially spotted a smaller, darker-mantled gull with a dark eye resting with Ring-billed Gulls (*Larus delawarensis*) which we quickly recognized as a Mew Gull. We spent the next fifteen minutes observing and photographing the bird at close range. At 0730 h the bird flew a short distance, landed in another gull flock, and was not seen again.

Initially, the most striking features of this bird were the smaller size, slightly darker mantle and upperwing, dark eye, and especially the bill shape and pattern. The bird was in a large flock of gulls near the tip of Cape Hatteras. The majority of the gulls were Ring-billed Gulls, though there were also numerous Herring Gulls (*Larus argentatus*) and Great Black-backed Bulls (*L. marinus*) present. The bird was slightly smaller than a Ring-billed Gull, and in general appeared slimmer and longer-winged. The bill was much slimmer and shorter than the bill of a Ring-billed Gull under direct comparison. We estimated the bill was 50% shorter than the bill of a Ring-billed, and not much more than half as thick. The bill color was more greenish than that of adjacent adult Ring-billed Gulls. There was a darker, very thin subterminal ring on the bill which appeared brown. Also, the bill appeared more pointed than the bill of a Ring-billed Gull. The bird was distinctly smaller-headed than nearby Ring-billed Gulls. The head was mostly white with a light gray wash on the rear

portion of the crown and some faint brown streaking across the nape. There was also a dark gray smudge anterior to, and touching the eye. When compared to Ring-billed Gulls, the eye appeared large relative to the size of the head. The eye was dark-colored, with no hint of yellow in the iris. The underparts were white. The Mantle, scapulars, and upperwing were dark gray, a shade darker than the mantle of a Ring-billed or Herring Gull. When perched, the white color on the tertials was more extensive than those of a Ring-billed Gull. Small white tips to the outer primaries, as well as a large white mirror on the outermost primary, were also visible when the bird was perched. The legs were a dull yellow-green, noticeably duller than the legs of nearby Ring-billed Gulls. The tail was white. During our brief view of the bird in flight we noted a lack of extensive white color in the wing tip. Large white mirrors near the tips of the outer two primaries were visible as were smaller white tips to the next four or five primaries. There was no white color separating the black bases of the primaries from the otherwise gray upperwing. There was a clear white trailing edge to the wing, extending outward to at least the innermost primaries. The pattern of the underwing was not studied. We aged the bird as an adult Mew Gull in basic plumage on the basis of the wing pattern, leg and bill color, and lack of any markings on the tail.

The identification of this bird to subspecies was based almost entirely on wing pattern. White color in the primaries was restricted to large mirrors near the tips of the outermost two primaries, and smaller white tips to the next four or five primaries. This pattern is consistent with *L. c. canus*. The North American subspecies *L. c. brachyrhynchus* has much more white in the primaries, especially the white area dividing the black primaries (numbers three to five according to Grant) from the grayer upperwing, and less black in the wing tip. Other points which favor *L. c. canus*, but which are not by themselves definitive, are the dark subterminal ring on the bill and the dark iris.

This represents the third record of a Mew Gull in North Carolina. The previous two records were also from the Outer Banks: 31 December 1980 at Cape Hatteras Point, Dare County (Lewis, et al. 1981) and 27 December 1983 at Hatteras Inlet, Dare County (Lewis 1984). The 1980 bird was an adult *canus* while the 1983 bird was apparently a first-winter *brachyrhynchus*. Most records of vagrant Mew Gulls on the Atlantic Coast are of the European subspecies *L. c. canus* (American Ornithologists' Union 1983).

## LITERATURE CITED

American Ornithologists' Union. 1983. Check-list of North American birds, 6th ed. American Ornithologists' Union, Washington, DC.

Grant, P. J. 1986. Gulls: A guide to identification. Buteo Books, Vermillion, SD. 352 pp.

Lewis, R. H. 1984. Second record of Mew Gull for North Carolina. Chat 48:94–95.

Lewis, R. H., M. Tove & H. E. LeGrand, Jr. 1981. Rare gulls at Cape Hatteras, N.C., including first Carolina record of Mew Gull. Chat 45:75–77.

## White-tailed Kite in Western North Carolina

NORMA AND BILL SIEBENHELLER
187 Glen Cannon Drive
Pisgah Forest, NC 28768

On Friday 23 July 1993 the authors were birding at the Shining Rock Wilderness Area, Haywood County, NC when we sighted an adult White-tailed Kite (*Elanus leucurus*) near the parking lot at the end of Forest Road 816, in an area called Flat Laurel Creek.

We had stopped to overlook the valley just east of the parking lot, at 1030 h. The valley is open, grassy, with scattered shrubs and trees including a dozen tall dead snags. The weather was clear, with blue sky, scattered clouds and a light haze in the distance. Temperature was about 80° F.

We were scanning the area, looking south and west, with Zeiss 7x42 Dialyt and Bushnell Custom 7x35 binoculars when a very pale, ghostly raptor appeared from the west. It sailed towards us and dipped to explore the valley below. At that point, as we looked down on the moving bird, we saw that it had long pointed (falcon-shaped) wings, and a long tail. The bird was much larger than a kestrel, appearing to be approximately peregrine-sized. The crown, back and wings were pale gray and the tail was even paler, almost white as we looked from above; and we were struck immediately by the sight of two inky-black triangles at the forward bend of the wings.

The bird eventually lit on the very top of a tall snag, facing us. Head-on, it appeared all white, with yellow legs. When it moved its head, which it did from time to time, we caught sight of a black line through the eye, or from the base of the bill to the eye. At this point, the bird was approximately 400 ft from where we stood. When it dipped its head downward toward its breast, we could clearly see that the crown was pearl-gray, contrasting with the white on the face and breast.

It remained perched for five minutes, then took off again. It rose slightly and hovered, like a kestrel; then it flew a short distance and hovered again for a few seconds. It did not go after any prey, however. It then rose higher, so that for the first time it was above our heads. From the underneath it looked all white on the body and tail. We both noticed a gray wash near the tip of the pointed wings, and Bill Siebenheller saw small black marks at the bend in the wing.

The bird did not flap much but rather appeared to glide or sail away from us, going west. It gradually distanced itself from our position until it disappeared into the mists of the western hills.

We had watched it, all told, for about ten minutes. On the basis of all we had seen we concluded that it was an adult White-tailed Kite.

We remained where we were for a few minutes, then walked to our car where we made notes on what we had just seen. We scanned the skies to the west of the parking lot, hoping to see the bird again, but it did not appear. Along with many other birders we returned to the area the following day, 24 July, but the kite was not seen again.

We had seen a White-tailed Kite once before, at Bentsen State Park in Texas in November 1992. That bird was also an adult and exhibited the same distinctive markings we saw on this bird.

The White-tailed Kite has been described by Potter et al (1980) as a "very rare accidental" in the Carolinas. Pearson et al (1959) list one sight record, in Davie County, from 1946. An early sighting was reported in The Chat (21:70-71). More recently, color photographs taken at Fort Fisher, New Hanover County, NC on 8 April by Clyde Sorenson were deposited in the NCSM Bird Photo files (Nos. 130, 131,132, 137-145, 270). A 1992 sighting by Eric Dean, with photographs, has been reported but not yet published at this writing.

Acknowledgments: The authors wish to thank Lynn Moseley and David Lee for their helpful suggestions and assistance in the preparation of this manuscript.

LITERATURE CITED

Pearson, T. G., C. S. Brimley & H. H. Brimley. 1959.. Birds of North Carolina (revised by D. L. Wray and H. T. Davis). N. C. Department of Agriculture, Raleigh.

Potter, E. F., J. F. Parnell & R. P. Teulings. 1980. Birds of the Carolinas. University of North Carolina Press, Chapel Hill

**CBC Rare Bird Alert**
**(704) 332-BIRD**

## BRIEFS FOR THE FILES

RICKY DAVIS

(All dates Winter 1993-1994)

PACIFIC/ARCTIC LOON: This winter saw an unprecedented number of reports from North Carolina. Individuals were at Figure Eight I. on 9 January (Derb Carter), Rodanthe on 5 February (Steve Dinsmore, Susan Grove), Wrightsville Beach on 19 February (Sam Cooper, Kevin Markham), Figure Eight I. and Ft. Fisher on 22 February (Derb Carter, Roger McNeill, Todd Hass, John Wright), and Cape Hatteras point on 1 March (David Wright). All of these were presumed to be Pacifics but a bird showing a definite white flank patch above the waterline was seen at Wrightsville Beach on 5 February (Derb Carter, Kitty Kosh) and was thought to be a possible Arctic!

WESTERN GREBE: The Cape Hatteras point bird present since the fall, remained on the big pond until early December. After a three week absence, it reappeared in the ocean off the point on 29-31 December (Steve Dinsmore, Harry LeGrand, Allen Bryan, Bob Lewis, Ricky Davis). Also two showed up at the basin at Ft. Fisher for one day on 6 December (Greg Massey) for another record of this rare species! In this case, the similar Clark's Grebe was carefully ruled out also.

RED-NECKED GREBE: Most likely due to a major freeze-up in the Great Lakes and Northeast, there was an unprecedented invasion of this species to the Outer Banks during February. On the weekend of the 5th and 6th, Dinsmore counted 24+ along the beaches and the word was out!. During the rest of the month, many observers made trips to see the birds and counts of 20+ were common. Numbers seemed to build and the one day total of 87! on the 25th (Sam Cooper, Trip Dennis) was astounding! Red-neckeds were also found at several inland sites including one at Jordan Lake on 6 February (Ricky Davis), 1-2 at Salem Lake, Winston-Salem on 9-16 February (Ramona Snavely), one at Belews Lake, Stokes County on 19 February (Eric Dean), three at L. Townsend, Greensboro on 13-27 February (Herb Hendrickson, Elizabeth Link), and one at Beaver Lake, Asheville on 25 February (fide Ruth Young).

EARED GREBE: In North Carolina this species was more common than usual with at least 5 different individuals along the Outer Banks from Whalebone to C. Hatteras point (many observers), 3 at the usual Goldsboro spot (Gene Howe, Eric Dean), one at Jordan Lake (many observers), and one at L. Wheeler near Raleigh (Hader and others). In South Carolina, two were present at Sumter throughout the season (Lex Glover).

NORTHERN FULMAR: Thirteen off of Currituck Banks on 13 February (Ned Brinkley, Harry LeGrand, et al.) and three off Hatteras on 15 February (Brian Patteson, Ned Brinkley, Todd Hass, Steve Dinsmore) were the only reports.

MANX SHEARWATER: Always noteworthy in North Carolina waters were three off Hatteras on 15 February (Brian Patteson, et al.). Also a small

black and white shearwater seen from shore on Bodie I. on 28 December (Allen Bryan) was almost certainly a Manx.

AUDUBON'S SHEARWATER: Two were identified off Hatteras on 15 February (Brian Patteson, et al.) for a rare chance to study both this species and Manx Shearwater the same trip.

NORTHERN GANNET: An impressive count of 15,000+ was made along the Outer Banks on 5+6 February by Steve Dinsmore.

AMERICAN WHITE PELICAN: There were 4-7 at North Pond, Pea I., NC from late December to early February (many observers), 4 near Swansboro, NC on 26 December (Jimi and Nell Moore), and ane at Bear I., SC on 29 December (Jon Dunn, Steve Utterback). Inland, a first record for Falls Lake near Raleigh, NC was of three there on 8-13 February (Will Cook, Jeff Pippen, et al.).

BROWN PELICAN: Always unusual away from salt water, one was in a ditch near Pungo Lake, NC on 23 January as noted by John Fussell.

ANHINGA: This species is very rare in winter in North Carolina, thus one on the New Bern CBC on 20 December (John Wright) was noteworthy.

AMERICAN BITTERN: Bitterns are not common, especially inland, thus one at Kehukee Swamp near Scotland Neck, NC on 24 January (Frank Enders) was a good find.

GREEN HERON: Wintering birds were found at Buxton, NC on 27 December (Harry LeGrand, Eric Fulcher), Avon, NC on 11 January (Steve Dinsmore), and Georgetown, SC on 17 January (Anne and Vernon Waters).

GREAT EGRET: An individual of this species overwintered at Bunn's Lake, near Zebulon, NC (Ricky Davis) for a rare inland report.

LITTLE BLUE HERON: Another rare occurrence of wintering away from the immediate coast, one was on the New Bern CBC on 20 December (several observers, fide Bob Holmes).

YELLOW-CROWNED NIGHT-HERON: Two were at Orton Pond, Brunswick County, NC on 11 December (Greg Massey) for a rare winter record.

CATTLE EGRET: In winter, Cattle Egrets are normally gone from North Carolina, but two areas consistently hold some each year. Four were on the L. Mattamuskeet CBC on 30 December (Harry LeGrand) and one was near Morehead City during the winter (Allen Bryan, Bob Holmes, John Fussell).

FULVOUS WHISTLING-DUCK: After the fall influx in the C. Hatteras area, one remained there to at least 12 December (Todd Hass, Joe Poston, Greg Dodge). Another or the same bird was seen to the north at Bodie I. pond on 28 December by Harry Armistead.

MUTE SWAN: This species was reported all over North Carolina this winter. As Chesapeake Bay populations continue to increase, we may see more and more of these birds in our area. One was on the Yadkin River, Forsythe County, on 1 January (Keith Byrd, fide Ramona Snavely), 11 were at Salem Lake, Winston-Salem on 9 January (Doug and Ann DeNeve, et al.), 7-10 were at Cane Creek Reservoir, Durham County in early February (Len Pardue, Todd Hass, Roger McNeill, Jeff Pippen, et al.), two were at Goldsboro on 19 February (Gene Howe, Steve Cross), and two were on L. Townsend, Greensboro on 20 February (Herb Hendrickson, Henry Link). In South Carolina one was on L. Busbee, Conway on 25 February (Jack Peachey).

WHOOPER SWAN: An adult was found at L. Mattamuskeet, NC from late January to mid-February by refuge personnel. Several others got to see this bird whose origin was unknown and wild status questionable, although this species is rarely kept in captivity!

TUNDRA SWAN: Good counts away from the normal wintering areas in northeastern North Carolina were two on the Southport CBC on 2 January (Steve Dinsmore, Susan Grove), 27 at Ft. Fisher on 12 January (Ralph Widrig), 5 at Harris Lake, near Raleigh on 2 January (Ken Knapp), 9 at Rocky Mount on 18 February (Ricky Davis), and 28 at Santee, SC on 6 February (Anne and Vernon Waters).

SNOW GOOSE: This species turned up at numerous sites in the Carolinas this winter with the best count being 20 blues and 5 whites at the Savannah River Spoil site on 30 December (Anne and Vernon Waters). The farthest west were two blue phase in Guilford County, NC on 22 January (Herb Hendrickson)

ROSS' GOOSE: The large Snow Goose flock at Pungo National Wildlife Refuge contained at least 3 individuals during January (Derb Carter, Ricky Davis), but the real news was the presence of birds in the western part of the state. A first record for the mountains was of one in the Mills River area near Hendersonville during January (Marilyn Westphal, several others) and a piedmont first was of two in Mecklenburg County during January and February (many observers)! The status of these birds was thoroughly checked out locally and all concerned felt that they were wild.

GREATER WHITE-FRONTED GOOSE: A good total for the Carolinas was the 5 found at the Yawkey Wildlife Center, Georgetown County, SC on 15 February by Lex Glover.

BRANT: One flying south just offshore of Huntington Beach State Park on 7 December (Jack Peachey) was locally rare but the flock of 320! flying off the beach on the Litchfield-Pawley's I. CBC on 30 December (Murray Honick, et al.) was truly astounding! This total is a record count for South Carolina.

EURASIAN WIGEON: This species turned up inland in North Carolina this season in unprecedented numbers. All males, individuals were at L. Johnson, Raleigh on 4 December (Vernon Janke, et al.), Harris Lake near Raleigh on 27 December (Neal Pate, fide Steve Dinsmore), and Greenville on 20 January (John Wright). There were a couple of the usual coastal reports with singles at Pea I. on 28 December (Ken Knapp, et al.) and Portsmouth on 2 December (Steve and James Dinsmore).

GREATER SCAUP: There were widespread reports of this scaup across inland North Carolina with the best totals being 26 at L. Higgins, near Greensboro on 24 January (Henry Link, Herb Hendrickson) and 15 at Jordan Lake on 6 February (Ricky Davis, many others).

REDHEAD: The best count for this uncommon inland species was 36 at Belews Lake on 22 January as seen by Ramona Snavely.

KING EIDER: Kings are much less numerous in the Carolinas than Commons, thus any sightings are noteworthy. An individual was found at C. Hatteras point on 16 January (John Wright) and the same or another was there on 25 February (Sam Cooper, Kevin Markham).

COMMON EIDER: Up to three were present at the Avon, NC pier 11 January (Steve Dinsmore) to 15 February (Harry LeGrand, Derb Carter). Two were in the Oregon Inlet-Pea I. area from 28 December (many observers) to mid-February (many observers). Also one was at C. Hatteras point 13-15 February (Russ Tyndall, Patricia Earnhardt). The only South Carolina report was of one at Huntington Beach State Park on 4 December (Lex Glover).

HARLEQUIN DUCK: The usual spot at the Oregon Inlet bridge hosted a pair of imm. from 13 December (Greg Dodge) until at least 23 January (Steve Dinsmore). Also a female was at the C. Hatteras lighthouse area on 20 January (Marcia Lyons) and two imm. males were at Rodanthe on 30 January (Henry and Elizabeth Link). Much rarer locally was the 5 (3 females and 2 imm. males) flying past Wrightsville Beach on 12 February as seen by Sam Cooper.

OLDSQUAW: Notable inland reports included 7 at L. Townsend on 12 December (Herb Hendrickson, Henry Link, Dennis and Lynn Burnette), two at Jordan Lake on 6 February (Ricky Davis), and 4 at Goldsboro on 5-15 February (Eric Dean). Also from 1-3 at North Inlet, Georgetown County, SC from 14 December to 29 January (Lex Glover, et al.) was a rare local record.

SCOTERS: Inland records of scoters are always noteworthy, thus this season there were 6 Blacks at L. Townsend on 11 December (Herb Hendrickson, Henry Link); two Surfs at L. Osceola, Transylvania County, on 26-27 November (Wayne Forsythe) and one Surf at L. Townsend on 13 February (Herb Hendrickson, Emily Tyler); and one White-winged at Salem Lake near Winston-Salem from 8 January to 9 February (Ramona Snavely). Also an impressive count for the Carolinas was the 150+ White-wingeds in the ocean off Rodanthe from 29 January to mid-February (Steve Dinsmore, and others)

COMMON GOLDENEYE: This species was much more widespread in the Carolinas this winter. Inland reports included birds at Roanoke-Rapids Lake in December and January (Ricky Davis, Frank Enders), one at Buckhorn Res. near Wilson on 18 December (Ricky Davis), one at Jordan Lake on 5 January (Henry Link) and then 28! there on 13 February (Will Cook, Julia Shields), two to four at Salem Lake, Winston-Salem on 16-23 January (Ramona Snavely), up to eight in the Guilford County area from mid-January to mid-February (Herb Hendrickson, Henry and Elizabeth Link), 6 at Goldsboro on 13 February (Gene Howe), and 4 at L. Greenwood, SC on 20 January (Steve Patterson). Also a good coastal South Carolina count was 15+ at Georgetown on 29 January as noted by Simon Thompson.

RED-BREASTED MERGANSER: The only inland birds reported were two at L. Townsend on 1 January and one at L. Brandt on 13 February (Herb Hendrickson).

HOODED MERGANSER: Of note was this species nesting at Silver Bluff Audubon Sanctuary in Jackson, SC for the third year in a row (Anne and Vernon Waters)!

COMMON MERGANSER: There was a good count of 20 at the usual Roanoke-Rapids Lake spot on 21 January (Frank Enders). Other reports

included four at Salem Lake, Winston-Salem on 14 February (Ramona Snavely), three at Jordan Lake on 2 January (Henry Link, Roger McNeill), and two at Dreher I. State Park, Newberry County, SC on 3 February (Irvin Pitts). Slightly rarer on the coast, one was on the Litchfield-Pawley's I. CBC on 30 December (Wendy Allen, et al.).

OSPREY: A very rare inland winter record was of one on the Goldsboro CBC on 18 December (John and Paula Wright, Russ Tyndall, Patricia Earnhardt).

BALD EAGLE: This species continues to increase in the Carolinas throughout the year. Winter reports were numerous with the farthest inland being 2 adults and 1 sub-adult all winter in the Greensboro area (Herb Hendrickson).

GOSHAWK: This species is extremely rare in the Carolinas but this winter there was almost a flurry of sightings! An adult was at C. Hatteras on 30 December (Bob Lewis) and another (or same?) adult was near Pungo National Wildlife Refuge from 23 January to 3 February (Ricky Davis, Frank Enders). Another report involved an immature bird seen briefly by a couple of different observers in the Chapel Hill NC area in late January. Immature male Goshawks can be quite similar to immature female Cooper's, so caution should be expressed in identifications of these young birds.

ROUGH-LEGGED HAWK: The rare Rough-leg was seen in North Carolina with single birds at L. Mattamuskeet on 30 December (Allen Bryan), near Roper on 14 January (Derb Carter), and near Salisbury in February (fide Taylor Piephoff).

GOLDEN EAGLE: There were three reports of Golden Eagle with one imm. in Transylvania County, NC on 29 November (Jeanne Grimmenga), one adult in the Grassy Creek area of Ashe County, NC in early December (fide James Coman), and an imm. at the Yawkey Wildlife Center, Georgetown County, SC from early December to mid-February (Lex Glover, several others).

MERLIN: A very rare mountain winter record was of one on the New River CBC on 23 December (fide James Coman).

PEREGRINE FALCON: Of special interest was the report of one taking up residence in downtown Winston-Salem, NC in late December through the winter (Royce Hough, fide Ramona Snavely).

YELLOW RAIL: The extremely secretive Yellow Rail was glimpsed twice in North Carolina this winter. One was flushed from North River marsh near Beaufort on 19 December (John Fussell, et al.) and another was heard calling and flushed from a marsh at N. Topsail Beach on 8 January by Nell Moore.

SANDHILL CRANE: The L. Mattamuskeet individual returned this winter and was seen by many observers during January and February for about the fourth year.

PIPING PLOVER: A very good winter count was 34 at Portsmouth on 4 December (Steve and James Dinsmore).

AMERICAN AVOCET: Another impressive total for a wintering shorebird was the 432 Avocets at the Yawkey Wildlife Center, Georgetown County, SC on 16 January (Lex Glover, Bert Fisher).

YELLOWLEGS: Rare in winter inland were the one Greater and 4 Lessers on the Durham CBC on 19 December (fide Will Cook).

SPOTTED SANDPIPER: This species is a rare but locally regular winter resident in the Carolinas. This season, single birds were found at Goldsboro on 18 December (Russ Tyndall, Patricia Earnhardt), at New Bern on 20 December (John Wright), and at Southport on 2 January (Steve Dinsmore).

LONG-BILLED CURLEW: Wintering birds were at the usual spots this season with one at Ft. Fisher on 2 January (Ricky Davis), two at C. Romain National Wildlife Refuge on 30 January (Robin Carter, Caroline Eastman, many others), and one all winter at Portsmouth (Steve Dinsmore).

WESTERN SANDPIPER: A flock of 55! on the Durham CBC on 19 December (fide Will Cook) was an impressive total for an inland site in winter.

WHITE-RUMPED SANDPIPER: A very rare winter report was of one at Pamlico Point, NC on 13 January (P.J. Crutchfield, et al.). The white rump was seen to rule out other peeps.

LONG-BILLED DOWITCHER: A count of 28 at Eagle I., Wilmington on 23 December (Greg Massey) was a very good total for this species in southeastern North Carolina.

RED PHALAROPE: A rare onshore winter report was of one adult seen near the Rodanthe fishing pier on 29 January (Henry and Elizabeth Link). Also 13 were seen off of Hatteras on 15 February by Ned Brinkley, Brian Patteson, Todd Hass, and Steve Dinsmore.

JAEGERS: There were the usual handfull of jaeger sightings from shore this winter. Pomarines were identified at Coquina Beach, north of Oregon Inlet on 29 December (Ricky Davis, et al.), Ft. Fisher on 17 January (Ralph Widrig), and Rodanthe on 5 February (Steve Dinsmore, Susan Grove). Parasitics were seen near Avon on 14 February (Brian Patteson, Ned Brinkley, Butch Pearce) and at Litchfield Beach, SC on 27 February (Robin Carter, Caroline Eastman).

LAUGHING GULL: One at the Raleigh landfill on 7 December was a rare winter record (Ricky Davis).

LITTLE GULL: An unprecedented invasion of Little Gulls hit North Carolina's Outer Banks during February. Dinsmore counted an amazing 91! (including 63 from Rodanthe alone!) along the beaches on the 5th. And for the rest of the month, many different observers saw anywhere from a handfull to a dozen or more birds from several areas. There was also a huge number (45,000+) of Bonaparte's Gulls present along the beaches (Dinsmore) during this period. One wonders what percentage of the East Coast Little Gull population was off North Carolina this February?

BLACK-HEADED GULL: The only reports were of adults at Southport 2 January to 19 February (Sam Cooper) and at Oregon Inlet on 15 January (Steve Dinsmore).

CALIFORNIA GULL: North Carolina's second documented record (in as many years) was provided by an adult photographed at C. Hatteras point on 27 December (Bob Lewis, Mike Tove, John Wright, Allen Bryan). This individual was also seen there on 15 January by Derb Carter and Harry LeGrand. Another (or the same?) adult was found near Avon to the north of C. Hatteras on 5 February by Steve Dinsmore and Susan Grove.

THAYER'S GULL: One adult was found at C. Hatteras on 27 December (Ricky Davis) for the only coastal report. A first inland record for North Carolina was of a 1st winter bird at the Raleigh landfill on 4-6 February as seen by Bob Hader and Derb Carter.

ICELAND GULL: Another first inland record for North Carolina was provided by a 2nd winter Iceland at the Raleigh landfill on 15 February (Bob Hader, Will Cook, Jeff Pippen). The only other reports of this species came from the Outer Banks with one adult at C. Hatteras from 29 December to 15 January (Steve Dinsmore, Ricky Davis), one 2nd winter bird at C. Hatteras from 29 January (Dinsmore, et al.) to 26 February (many observers), a 1st winter bird at C. Hatteras on 15 February (Brian Patteson, et al.), a 1st winter at Avon on 6 February (Dinsmore), and an individual offshore of Currituck Banks on 13 February (Ned Brinkley, Harry LeGrand, et al.).

LESSER BLACK-BACKED GULL: As usual, North Carolina's Outer Banks had good numbers with the best count being a respectable 24 on 5 February (Steve Dinsmore, Susan Grove). Elsewhere in that state, two adults and one immature were at the Craven County landfill on 25 January (Bob Holmes, Wade Fuller) for a first county record. The real news however came from the Raleigh area with at least four individuals! The Raleigh landfill hosted an adult on 15 February (Bob Hader, Will Cook, Jeff Pippen), a 3rd winter bird on 4 and 7 December (Bob Hader, Harry LeGrand, Ricky Davis), and a 1st winter bird on 4 February (Bob Hader, Derb Carter). Also a 2nd winter plumaged bird was at Falls Lake on 6 February (Ricky Davis). South Carolina reports included two adults and one immature at the Horry County landfill from 4 December to at least 29 January (Jack Peachey, Tonya Spires, Simon Thompson, Lex Glover, et al.) and two adults at Litchfield Beach in January (Harry LeGrand, Derb Carter, Len Pardue, John Wright).

GLAUCOUS GULL: One adult at C. Hatteras on 27 December (Bob Lewis, et al.) was not unexpected, but the presence of at least two 1st winter birds in the Raleigh area was a very rare occurrence. One was at the Raleigh landfill on 2 February (Bob Hader) and two were at Falls Lake on 6 February (Ricky Davis).

GREATER BLACK-BACKED GULL: The Raleigh area hosted an unprecedented number of this species this winter. Three immatures were at Jordan Lake on 2 January (Henry Link, Roger McNeill), one imm. was near Cary on 16 January (Jim Mulholland), an adult and immature were at the landfill on 4 February (Bob Hader, Derb Carter), a third winter bird was at Falls Lake on 6 February (Ricky Davis), a 1st winter bird was at Falls on 9 February (Will Cook, Jeff Pippen), and two imm. were at the landfill on 7 February (Bob Hader, Jim Mulholland).

BLACK-LEGGED KITTIWAKE: Good offshore counts were 39 off Currituck Banks on 13 February (Ned Brinkley, Harry LeGrand, et al.) and 22 off Hatteras on 15 February (Brian Patteson, et al.). From shore, single immatures were seen at Ft. Macon on 10 December (John Fussell), Whalebone Junction near Nags Head on 29 January (Henry and Elizabeth Link), and Rodanthe on 6 February (Steve Dinsmore, Susan Grove).

FORSTER'S TERN: A rare inland winter record was of two at Goldsboro on 18 December (Russ Tyndall, Patricia Earnhardt).

BLACK GUILLEMOT: One was seen with murres at Litchfield Beach, SC on 29 January by Robin Carter, Caroline Eastman, Ruth Young, and Steve Patterson. Amazingly this is the second year in a row the species has been found in the state!

THICK-BILLED MURRE: An unbelievable number of 12 birds were in the ocean off Litchfield Beach on 29 January (Robin Carter, Caroline Eastman, Ruth Young, Steve Patterson) for a record count for the Carolinas. Not to be outdone, North Carolina had Thick-bills at Rodanthe on 6 February (Steve Dinsmore), off C. Hatteras lighthouse on 25 February (Ricky Davis), and another along the banks on 27 February (Butch Pearce, Paul McQuarry).

DOVEKIE: An impressive count for the Carolinas was the 257 tallied offshore of Currituck Banks on 13 February (Ned Brinkley, Harry LeGrand, et al.). From shore one was at Baldhead I. near Southport on 2 January (Derb Carter), two at Rodanthe on 6 February (Steve Dinsmore), and one at Ocracoke on 25 February (Ricky Davis). In South Carolina, one was at Litchfield Beach on 27 February (Robin Carter, Caroline Eastman).

RAZORBILL: The Razorbill staged what must have been a record invasion of the North Carolina Outer Banks region in February. Local fishermen reported that between two and three thousand birds were offshore, and a count of 516 was had on 15 February by Brian Patteson, Ned Brinkley, Todd Hass, and Steve Dinsmore. Actual counts from shore included 1184 on 14 February (Brian Patteson, Ned Brinkley, Butch Pearce), 587 on 25 February (Ricky Davis, Sam Cooper, Kevin Markham, Trip Dennis), and lesser numbers by many observers throughout the month. Also two were farther south at Ft. Fisher on 2 January (Ricky Davis, John Fussell, Jim Odonnell, Buddy Garrett).

BAND-TAILED PIGEON: North Carolina's second record was of a bird which frequented a Charlotte neighborhood in February and stayed until spring. Many observers were able to see the bird and documentation was provided by video footage which should place the bird on the state's official list.

SHORT-EARED OWL: This species was again present at the First Colony area near L. Phelps with 3 on 19 December (Keith Camburn) and 12+ on 23 January (Steve Dinsmore). Individuals were also noted at Ft. Fisher on 2 January (Ricky Davis), C. Hatteras from 27 December until 11 January (Steve Dinsmore), and at Alligator River National Wildlife Refuge on 16 January (Harry LeGrand, Derb Carter).

WHIP-POOR-WILL: A rare winter report was of a bird heard near Beaufort, NC on 19 December (John Fussell).

RUBY-THROATED HUMMINGBIRD: Wintering birds included 1-2 adult males in Carteret County, NC all winter (John Fussell), one adult male at Oriental, NC from 4-21 December (Dorothy Foy), and an imm. male there from 20-21 December (Foy). *Archilochus* hummers were also noted in good numbers with one in Greenville, NC through January (John Wright), one at Raleigh on 18 December, and 8+! in the Carteret County, NC area until January (John Fussell).

RUFOUS HUMMINGBIRD: An imm. male was in Transylvania County, NC until 15 January (fide Norma Siebenheller), with the identification confirmed by bander Bob Sargent. Other *Selasphorus* hummers included

imm. males at Beaufort, NC from 13-19 December (Larry Crawford, John Fussell) and at Goldsboro, NC from 18 December to 15 January (Eric Dean).

EASTERN PHOEBE: A rare occurrence was the Phoebe at an elevation of 3300+ on Roan Mountain, NC on 2 January as noted by Rick Knight.

EMPIDONAX SP.: One of these flycatchers was seen near Aiken, SC on 24 December (Carol Eldridge, fide Anne Waters) for a very rare winter report.

EASTERN KINGBIRD: One on the Jordan Lake CBC on 2 January (Fran Hommersand, et al.) was absurdly late but not without precedent! Another Eastern Kingbird was on the same count a couple of years ago.

BANK SWALLOW: One on the New Bern CBC on 20 December (John Fussell) provided an extremely rare winter report.

CLIFF SWALLOW: Six very late birds were observed flying south at Huntington Beach State Park, SC on 15 December (John Cely). The birds were carefully studied to rule out other species. Observers in the Carolinas should be aware that at this time of year, Cave Swallow is almost more likely to be found than Cliff.

BARN SWALLOW: Late individuals included one in Transylvania County, NC on 1 December (John Huggins), one at Long Beach, NC on 2 January (Steve Dinsmore, Susan Grove), and one at nearby Ocean Isle on 3 January (Mary McDavit).

COMMON RAVEN: This species continues to increase and spread from the mountains. This winter 7 were in the downtown Winston-Salem, NC area and a pair began nesting (Ramona Snavely). Also two were farther east at the Greensboro, NC landfill on 26 February (Henry Link, fide Herb Hendrickson). How far can these birds spread as they become more urban?

MARSH WREN: A rare inland winter record was one in the Duke Forest area on 8 February (Will Cook).

RED-BREASTED NUTHATCH: This species was more widespread across North Carolina this fall and winter. The best count came from the Roan Mountain area with 62 on 2 January (Rick Knight).

GRAY CATBIRD: One found on the Stone Mountain CBC on 30 December (fide James Coman) was very rare in the Blue Ridge Mntn. area in winter.

SPRAGUE'S PIPIT: This species is very rare in the Carolinas, thus the discovery of one at the Orangeburg Sod Farm in Orangeburg, SC on 22 January (Robin Carter, Caroline Eastman) was exciting. What made this record special was the fact that it remained here until spring and was seen by quite a few patient, determined observers.

WHITE-EYED VIREO: One on the Jordan Lake CBC on 2 January (Will Cook, Sterling Southern) was a rare winter report for inland North Carolina.

BLUE-WINGED WARBLER: A first winter record for the Carolinas was the presence of a Blue-wing at Oriental from 30 January until spring as noted by Dorothy Foy. This extremely out of place bird was photographed, but not banded.

TENNESSEE WARBLER: A very late migrant was one at Huntington Beach State Park on 7 December (Jack Peachey).

YELLOW WARBLER: A rare winter report was of one at L. Mattamuskeet, NC on 24 December (Jon Dunn, Steve Utterback).

CAPE MAY WARBLER: An male was found on the Chapel Hill CBC on 26 December (Greg Dodge, Lauren Parmelee) and the same or another bird was present at a feeder in Chapel Hill from 22 January into February (Fran Hommersand).

YELLOW-THROATED WARBLER: Rare winter records included one at a feeder in Lumberton, NC from mid-December until 5 January (Neill and Elisabeth Lee), one at Santee State Park, SC on 30 December (Jimi and Nell Moore), and one at the Congaree Swamp National Monument on 21 December (Steve Dennis, fide Robin Carter).

PRAIRIE WARBLER: Wintering Prairies were slightly more numerous this season. An impressive 4 were on the Bodie-Pea Is. CBC on 28 December (many observers), and two were on the L. Mattamuskeet CBC on 30 December (Harry LeGrand). Also one was at the Congaree Swamp National Monument on 21 December (John Cely, fide Robin Carter) and another was at Huntington Beach State Park on 15 January (Anne and Vernon Waters).

BLACK AND WHITE WARBLER: This species regularly winters in small numbers in the Carolina coastal areas. This season a male was at Morehead City on 19 December (Allen Bryan), a male was at L. Mattamuskeet on 24 December (Jon Dunn, Steve Utterback), and a female was there on 4 February (Will Cook, et al.).

AMERICAN REDSTART: A possible first winter record for North Carolina was the female found on the Southport CBC at Ft. Fisher on 2 January (Ricky Davis).

OVENBIRD: This species is rare but regular in winter in the Buxton, NC area and two were found on the C. Hatteras CBC on 27 December (Allen Bryan). Much less expected though was the one found along Mill Creek, Carteret County, NC on 2 January (Jack Fennell, fide John Fussell).

YELLOW-BREASTED CHAT: The only winter report received was of one on the L. Mattamuskeet CBC on 30 December (Ricky Davis).

WESTERN TANAGER: The feeder of Kitty Kosh in Wilmington, NC once again hosted one of these birds for about the third record there. The bird, a male, was present from 13 December until at least 19 February and was seen by several observers. What's more interesting is the presence of a second Western , a female, at another Wilmington feeder from November until February (fide Greg Massey and Sam Cooper).

BLUE GROSBEAK: A rare winter record was of a female at a feeder in Wilmington, NC on 6-8 January (Greg Massey). An imm. male near Merchant's Millpond State Park, Gates County, NC on 14 February (Floyd Williams) was either a rare wintering bird or a very early spring migrant.

INDIGO BUNTING: South Carolina had one at Lugoff on 8 December (Lex Glover) and at Edisto I. on 27 February (J. Eggleston) for the only winter reports.

PAINTED BUNTING: This species usually is found somewhere in the Carolinas each winter. This season, Carteret County, NC had a monopoly with adult males located at Morehead City on 19 December (Russ Tyndall, Patricia Earnhardt), near Straits all winter (Carolyn Hoss, fide John Fussell), and C. Carteret all winter (Don Bryant, fide John Fussell).

BACHMAN'S SPARROW: Hard to find in winter, one was at the Lynchburg Savannah Preserve, Lee County, SC on 22 January and 2 February (Robin Carter, Lex Glover, Tim Kalbach).

CLAY-COLORED SPARROW: An individual found on the Wayne County CBC on 18 December (Harry LeGrand) was a rare winter report.

GRASSHOPPER SPARROW: One at the Lynchburg Savannah Preserve on 2 February (Lex Glover, Tim Kalbach, Robin Carter, Caroline Eastman) provided a locally rare winter sighting.

LARK SPARROW: One found at New Bern, NC on 20 December (Larry Crawford) was the only winter report.

HENSLOW'S SPARROW: This hard to find species was seen at Townville, SC on 6 January (Pete Worthington) and two were at the Lynchburg Savannah Preserve, Lee County, SC on 22 and 23 January by Robin Carter, Caroline Eastman, and Lex Glover.

LECONTE'S SPARROW: Another elusive, rare wintering sparrow, the LeConte's was found near Wilmington on 14 and 15 December (Sam Cooper), at Huntington Beach State Park on 29 January (Caroline Eastman), and at the Lynchburg Savannah Preserve on 22 January and 2 February (Robin Carter, Caroline Eastman, and Lex Glover).

LINCOLN'S SPARROW: This species has been found to be a locally regular winter resident in the coastal plain of the Carolinas. Reports are almost too numerous to mention, especially since observers are learning where and how to look for them. One bird found away from the usual wintering spots was at Townville, SC on 6 January (Pete Worthington).

LAPLAND LONGSPUR: The Orangeburg Sod Farm hosted a substantial wintering flock this year. From 10-20 were present by late December (Jon Dunn, Steve Utterback, Lex Glover, Bert Fisher, Les Todd) and their numbers increased to at least 52 on 22 January (Tim Kalbach, fide Robin Carter).They were still present as late as 19 February when five were seen (Robin Carter, Caroline Eastman). Also one near Albemarle, Stanly County, NC from late December to mid January (Doug Shadwick, Len Pardue, et al.) was locally rare.

SNOW BUNTING: As usual this species was found several times in North Carolina with one in Pamlico County until late January (fide Bob Holmes), 1-2 at Oriental in early January (Dorothy Foy), one at Southport on 2 January (Steve Dinsmore, Susan Grove), 3 at C. Hatteras on 27 December (Ricky Davis), and 3 near Avon on 11 January (Dinsmore).

YELLOW-HEADED BLACKBIRD: A female was seen in flight at Pea I. on 8 February by Jeff Pippen and Ricky Davis for a rare winter report.

BREWER'S BLACKBIRD: Three near L. Mattamuskeet on 9 January (Eric Dean) was a good count, but 27 in Georgetown County, SC on 2 January (Lex Glover, Bert Fisher, Les Todd) was an excellent total for the Carolinas.

SHINY COWBIRD: The only report was of 1-2 at a feeder in Wilmington from early January to mid February (Kitty Kosh).

NORTHERN "BALTIMORE" ORIOLE: One at a feeder in Greensboro, NC from 25 December to mid February (John King, fide Herb Hendrickson) was a little west of where expected in winter.

NORTHERN "BULLOCK'S" ORIOLE: This rare western form was found twice in southeastern North Carolina: a female in Richlands, Onslow County from 21-27 December (Jimi and Nell Moore) and another female in Wilmington from 4 January to March (Greg Massey). Could they have been the same bird?

PURPLE FINCH: This species was more widespread in the Carolinas this winter as compared to the past several years. The best count received was of 200+ in the yard of Bob Wood in Blythewood, SC all season.

WHITE-WINGED CROSSBILL: Surprisingly, the only crossbill report this winter was of the very rare White-winged! A female appeared at a feeder in Chapel Hill, NC on 10 February (Carol Hamilton) and remained for at least three or four days. Several lucky observers got great looks as the bird fed on the deck right outside a window.

COMMON REDPOLL: The Common Redpoll staged a major invasion this winter into states just to the north of the Carolinas. There were several reports in our area , but nothing like in Virginia and Maryland. In North Carolina, one was at Hatteras on 27 December (Harry Armistead, et al.) and there was a report of one being banded at Southern Shores on the Outer Banks in mid January (David Leake, fide Steve Dinsmore). In South Carolina, individuals were at Spartanburg on 7 January (Jennifer Wren, Simon Thompson), Columbia on 17 and 23 January (fide Pete Worthington), near Hopkins, Richland County on 22 January (Gary Sowell, fide Robin Carter), and at Simpsonville on 11 February (Pete Worthington).

EVENING GROSBEAK: This species continued its invasion started during the fall. There were birds all across the Carolinas in small numbers but the largest total came from Roan Mountain on 5 December when over 200 were found (Steve Dinsmore, Susan Grove).

## BOOK REVIEWS

### WHITE IBIS: WETLAND WANDERER.

Keith L. Bildstein. 1993. Smithsonian Institution Press, Department 900, Blue Ridge Summit, PA 17294. Hardback, 242 pp including references and index. $22.50.

Keith Bildstein, formerly on the faculty of Winthrop College in South Carolina and now the director of research at Hawk Mountain in Pennsylvania, has written this book describing his fifteen years of research in the life of the White Ibis at Hobcaw Barony near Georgetown, South Carolina.

I highly recommend this book to all readers of *The Chat* because it does an excellent job of describing the biology of a distinctive element of the avifauna of the Carolinas and, if this is possible, an even better job of describing how scientists actually conduct their studies. Scientists tend to be perceived as mysterious people in white coats who perform mystical activities that result in

increased knowledge about all sorts of arcane topics. Bildstein does a wonderful job of showing how it's really done with all the practical, human problems. What is even better, he makes it interesting to read.

While I thought the whole book was interesting, I was particularly intrigued by the last three chapters dealing with ibises in Trinidad, Hurricane Hugo, and conservation issues. These three chapters are particularly sobering and more than a little frightening for anyone with an interest in and concern for natural environments.—H. T. Hendrickson

## A BIRD FINDING GUIDE TO ALASKA

Nick Lethaby. 1994. Published by the author, 79 Mirabelli Circle, San Jose, CA 95134. Softcover, 151 pp. $14.95 + $3.00 shipping and handling.

Sooner or later many birders reach that point where they want to increase the size of their life list and they just can't do it with any high degree of probability within the confines of the contiguous 48 states of the U.S.A. Clearly, there are many options open that will allow you to accomplish your goal, but most of these involve travelling to a foreign country. There are, of course, two other states that are chock full of all sorts of neat and fascinating birds that are difficult if not impossible to come by in the usual states; Hawaii and Alaska.

Nick Lethaby, a relatively recent immigrant to California from Britain, has discovered the joys of birding in Alaska and has written this concise guide on how to find those birds that are closest to the heart of the dedicated lister. The book is designed for out-of-state birders and there appears to be no other comparable guide.

In addition to the usual accounts of the prime sites to consider visiting (he lists 23) and species accounts of the North American species that a visitor is most likely to be interested in seeing (he lists one hundred forty-two), there is a list of asian vagrants with an estimation of their probability of being seen in the area around Attu.

When you contemplate the expense of living and getting around in Alaska, Lethaby is to be congratulated for spending a considerable amount of attention to the practical concerns of getting around in a state the size of the eastern U. S. and how to avoid spending more money than you have. One of the things that he stresses is the need to plan what you want to do, when to do it, and how to do it in the most efficient fashion. This book is a must for all birders intending to explore the great white north. As an added incentive to purchase this book the author will offer a $1 discount to all members of the CBC who mention that they read about the book in *The Chat*.—H. T. Hendrickson

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# The Chat

(USPS 101-020)

Quarterly Bulletin of Carolina Bird Club, Inc.
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Vol. 59 SPRING 1995 No. 2

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Quarterly Bulletin of Carolina Bird Club, Inc.
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# THE CHAT

(USPS 101-020)

VOL.59 SPRING 1995 NO. 2

Published by the Carolina Bird Club, Inc.

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THE CHAT (USPS 101-020) is published quarterly for $12.00 by the Carolina Bird Club, Inc., with headquarters at the North Carolina State Museum of Natural Sciences, 102 N. Salisbury Street, Raleigh, NC 27603. Second-class postage paid at Raleigh, NC.
POSTMASTER: Send address changes to Carolina Bird Club, THE CHAT, P. O. Box 29555, Raleigh, NC 27626-0555.

PAGE CHARGES: Authors who have funds available for page charges are requested to remit same at the rate of $40.00 per page. CBC Headquarters will provide statements required for your business records.

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# A Review of Nesting Sites used by Least Terns in South Carolina

Lynette A. Savereno[1,2,3] and Thomas M. Murphy[2]

## ABSTRACT

We analyzed records of Least Terns (*Sterna antillarum*) nesting in South Carolina prior to 1989 to determine trends in site selection. Least Tern colonies were documented on 4 site-types prior to 1960 and 7 site-types after 1960. Before 1960, 83% of colonies were on traditional sites (barrier island beaches and shellbanks, n = 19), and 17% were on atypical sites (dredged material and fill, n = 4). After 1960, 56% of colonies were on beaches and shellbanks (n = 34) and 44% were on atypical sites such as peagravel roofs (n = 10), dredged material/islands (n = 9), dirt and gravel fill from construction sites (n = 6), agricultural fields (n = 1), and inland lake beaches (n = 1). Initially nesting success on roofs was as high as or higher than on beaches. However, there is a current trend toward reroofing with new materials that Least Terns apparently will not use for nesting. Because a high percentage of statewide nesting is now on peagravel roofs that may be rendered unsuitable in the near future, Least Terns stand to lose a valuable buffer against natural habitat loss.

## INTRODUCTION

Along the Atlantic coast, Least Terns traditionally nested on sand or shell beaches (Massey 1974, Wolk 1974, American Ornithologists' Union 1983). However, since the early 1960s a shift towards atypical nesting sites has occurred as development and other forms of human disturbance have increased (Fisk 1978, Jernigan et al. 1978, Gochfeld 1983). Gochfeld (1983) noted that contrary to historical records, terns in New Jersey were nesting on remote sites such as knobs and broad sand flats. He attributed this shift in site selection to a change in habitat availability caused by an increase in human use of beaches. In North Carolina, 72% of all nests were found on dredged material islands instead of natural beaches (Jernigan et al. 1978). Our goal was to determine if a similar shift to atypical sites was occurring in South Carolina. This research was carried out as part of a larger study designed to determine current distribution and population size of Least Terns nesting in South Carolina (Savereno 1992).

## METHODS

We searched museum egg collection records (Charleston Museum, Clemson University's Department of Zoology Vertebrate Collection, Dennis Wildlife Center, Museum of York County, Schiele Museum (Gastonia, NC), and South Carolina State Museum), nesting databases (South Carolina Colonial Waterbird [SCCWD] [1989], South Carolina Nongame and Heritage Trust [SCHTD] [1990], Cornell Laboratory of Ornithology's Colonial Bird Register [CBR]), and pertinent scientific literature for information on Least Tern nesting sites in South Carolina prior to 1989. Most sites were classified as

to type of habitat based on information provided with the records or in the literature. We considered typical nesting sites to be any naturally occurring substrate used traditionally by Least Terns. Atypical sites were those created as a result of human activity that would not otherwise exist.

## RESULTS

Seventy-six nesting sites were documented by word of mouth (D. Forsythe, pers. comm., The Citadel, M. Harrison, pers. comm., Porter-Gaud School), from egg collection records (Harlee 1936, Cutts 1962, Charleston Museum), nesting databases (CBR, SCCWD 1989, SCHTD 1990), and scientific literature, with the earliest dating to 1878[1] (Bowdish and Philipp 1910, Wayne 1910, Sprunt 1929, Tomkins 1959, Chamberlain 1960, Smith 1961, Beckett 1966, Post 1967, Teulings 1971, Downing 1973, Nugent 1974, Chamberlain and Chamberlain 1975, LeGrand 1976, Chamberlain 1978, Blus and Prouty 1979, Roche 1979, Portnoy et al. 1981, Rappole 1981, LeGrand 1983, Cornwell 1986, Cowgill 1989). Least Terns historically nested in all coastal counties. Most colonies were in Charleston County (n = 46). Three inland (non-coastal) nestings were also documented in the 1960s at two sites (Chamberlain 1960, Smith 1961, Post 1967). Four sites which could not be classified to habitat type were not included in further analyses.

Table 1. Number of Least Tern colonies in traditional and atypical sites in South Carolina.

| Site | Before 1960 | 1960–1989 | Total |
|---|---|---|---|
| Traditional[a] | 19 (83%) | 34 (56%) | 43 (60%) |
| Atypical[b] | 4 (17%) | 27 (44%) | 29 (40%) |
| Total | 23 | 61 | 72 |

[a]Ten sites were used before and after 1960.
[b]Two sites were used before and after 1960.

Eleven documented sites were active only prior to 1960, fifty sites only from 1960 and after, and eleven sites both before and after 1960. Before 1960, colonies were located on 4 site-types. Nearly all colony sites before 1960 were on beaches and shellbanks (n = 19), although such atypical sites as dredged material (n = 2) and fill (n= 2) were also used (Table 1). After 1960 colonies were located on 7 site-types. In addition to nesting on beaches and shellbanks (n = 34), terns were recorded nesting on such atypical sites as peagravel roofs (n = 10), dredged material/islands (n = 9), dirt and gravel fill from construction sites (n = 6), agricultural fields (n = 1), and inland lake beaches (n = 1).

[1]Colony locations, substrates, years active, and sources of information are available from T. M. Murphy.

## DISCUSSION

Although thorough statewide surveys and censuses of Least Tern colonies were not conducted in South Carolina prior to the 1970s, some trends are evident. Prior to extensive coastal development, which began in the 1940s, most colonies were found on barrier islands and mainland beaches. Because Least Terns suffer heavy predation from mammalian and avian (e.g., gulls) predators, they typically locate their colonies on isolated spits or islets, with little or no vegetation (Sandifer et al. 1980). Wayne (1910) reported thousands of Least Terns breeding on Sullivan's Island before 1878 but near extinction in South Carolina by the early 1900s. This decline was attributed to the millinery market, which affected the entire Atlantic coast (Pough 1951, Fisk 1975). As harvest of Least Terns declined, Bowdish and Philipp (1910), found several remnant colonies (<50 pairs) on Raccoon Key and Morris Island. After commercial harvesting became illegal in 1913, the Least Tern population steadily increased. By 1927 the population within 80 km of Charleston had recovered to at least 600 pairs (Burton 1970). Tomkins (1959) reported that the species was abundant once again by the 1930s and 1940s.

Accelerated coastal development and increased human use of beaches led to widespread loss of suitable nesting habitat in the 1950s, with a corresponding decline in Least Tern numbers (Nisbet 1973, Fisk 1975, Burger 1984). Tomkins (1959) reported that the population had been reduced to 5-8% of its historical (before 1890) numbers by the late 1950s. In 1976, the Least Tern was placed on South Carolina's threatened species list (Gauthreaux et al. 1979).

Colony sites, such as Cape Island and Raccoon Key, which have persisted over a prolonged period despite documented losses to flooding and depredation, are typically remote from human disturbance (Bowdish and Philipp 1910, Downing 1973, Blus and Prouty 1979, Roche 1979, Thompson 1980, SCCWD 1989, SCHTD 1990). In contrast, developed sites such as Edisto Island, Hilton Head, Isle of Palms, Kiawah Island, and Sullivans Island, have been abandoned (Blus and Prouty 1979, Roche 1979, SCCWD 1989). Concurrent with the loss of these active colonies was an increase in the number of roof colonies in nearby areas (Savereno and Murphy, unpubl. data).

After 1960, there was an increase in atypical nesting sites, especially in areas of heavy development. Nearly all were found in Charleston County, where commercial and residential development and recreational use of beaches was particularly heavy. Although tar and peagravel roofs have been common in the Charleston area for 50 years (Robert Popp, pers. comm., GS Roofing Products Co., Charleston, SC), Least Terns were not known to nest on them until 1975 (Roche 1979). In 1979 and 1982 more colonies were found on roofs than on beaches in the Charleston area (Thompson 1980, 1982). In 1989, 38% (n = 12) of colonies and 14% (n = 231) of total nests statewide were on peagravel roofs. By 1990, the percent of total statewide nesting on peagravel roofs had increased to 34% (n = 542 nests; 35% of colonies [n = 11]) (Savereno 1992). During the 1994 nesting season, over half of colonies (52%; n = 14) and nests (60%; n = 1,008) were on peagravel roofs (T. Murphy, unpubl. data, SC Dept. of Natural Resources).

With the appearance of roof nesting in Florida in 1957 (Goodnight 1957) and South Carolina in 1975 (Roche 1979) a means of increasing and managing suitable nesting habitat became available (Fisk 1978). Hatching success was greater on roofs than on beaches in several studies (Roche 1979, Gore and Kinnison 1991). Cornwell (1986) documented a roof colony in Horry County with 95% hatching success. In the Charleston area we observed that in addition to increased hatching success, peagravel roofs were capable of supporting colonies as large as or larger than beach sites (Savereno 1992). However, roofing contractors have begun replacing tar and peagravel roofs with a smooth rolled plastic material in the last 5 years. Least terns have not yet been documented nesting on these new roofs (Gore and Kinnison 1991, Savereno and Murphy pers. obs.). A plausible explanation is that these surfaces lack the similarities in color and texture to shelly beach substrates than white peagravel provides. If this new roof substrate continues to replace peagravel roofs, many existing and potential nesting sites will be lost. Faced with the prospect of losing suitable roof habitat, active management of high-priority natural and remaining roof sites will become increasingly critical.

## ACKNOWLEDGMENTS

We thank A. Savereno, S. Haig, R. Boettcher, W. Post and two anonymous reviewers for their helpful advice with this manuscript. We appreciate the many long hours M. Dodd, S. Landrum-Dodd, J. Coker, M. Mulligan and C. Koeppel spent collecting data in 1994. We are indebted to the following for providing information on nesting sites: K. Boyle of SCDNR, D. Forsythe of the Citadel, M. Harrison, A Hutchinson, S. Miller of Clemson University's Dept. of Zoology Vertebrate Museum, W. Post of the Charleston Museum, C. Sassaman of the S. C. State Museum, M. Turney of the Schiele Museum, the Museum of York County, and Cornell University's Colonial Bird Register. Research was funded by the South Carolina Department of Natural Resources and the South Carolina Sea Grant Consortium.

## LITERATURE CITED

American Ornithologists' Union (AOU). 1983. Check-list of North American Birds, 6th ed. Allen Press, Inc., Lawrence, Kan. 877 pp.

Beckett, T. A., III. 1966. Deveaux Bank - 1964 and 1965. Chat 30:93–100.

Blus, L. J. and R. M. Prouty. 1979. Organochlorine pollutants and population status of Least Terns in South Carolina. Wilson Bull. 91:62–71.

Bowdish, B. S. and P. B. Philipp. 1910. Bird photographing in the Carolinas. Auk 27:305–322.

Burger, J. 1984. Colony stability in Least Terns. Condor 86:61–67.

Burton, E. M. 1970. Supplement (to South Carolina Bird Life). University of South Carolina Press, Columbia.

Chamberlain, E. B. 1960. Least Terns, inland, and Spotted Sandpipers, nesting in S.C. Chat 24:99–100.

Chamberlain, W. D. 1978. The birds of Turtle Island, South Carolina. Chat 42:3–7.

Chamberlain, W. D., Jr. and E. B. Chamberlain. 1975. Avifauna of Kiawah Island. *In* Environmental Inventory of Kiawah Island, AV1-107, W. B. Campbell and J. M. Dean, eds. Environmental Res. Ctr., Columbia, S. C.

Cornwell, G. 1986. Adopt-a-tern-nest project. Chat 50:12–13.

Cowgill, R. W. 1989. Nesting success of Least Terns on two South Carolina barrier islands in relation to human disturbance. Chat 53:81–87.

Cutts, E. 1962. Nidiology data. Unpubl. data. Charleston Museum, Charleston, SC.

Downing, R. L. 1973. A preliminary nesting survey of Least Terns and Black Skimmers in the East. Am. Birds 27:946–949.

Fisk, E. J. 1975. Least Tern: beleaguered, opportunistic, and roof nesting. Am. Birds 29:15–16.

Fisk, E. J. 1978. Roof nesting terns, skimmers, and plovers in Florida. Fla. Field Nat. 6:1–8.

Gauthreaux, S. A., Jr., J. P. Holt, Lt. Col. F. M. Probst, T. A. Beckett III, and R. N. McFarlane. 1979. Status report - the birds, pp. 82–87. *In* D. M. Forsythe and W. B. Ezell, Jr., eds. Proceedings of the first South Carolina endangered species symposium. Nov. 1976. S.C. Wildl. Mar. Resour. Dep. and the Citadel. Charleston, S. C.

Gochfeld, M. 1983. Colony site selection by Least Terns: physical attributes of sites. Col. Waterbirds 6:205–213.

Goodnight, L. E. 1957. Least Tern. Fla. Nat. 30:123.

Gore, J. A. and M. J. Kinnison. 1991. Hatching success in roof and ground colonies of Least Terns. Condor 93:759–762.

Harlee, H. L. 1936. Oological record. Dept. Zool. Vert. Collections, Clemson University, Clemson, S.C.

Jernigan, L. S., J. F. Parnell, and T. Quay. 1978. Nesting habitats and breeding populations of the Least Tern (*Sterna albifrons antillarum*) in North Carolina. Natl. Oceanic Atmos. Admin., Sea Grant Publ. UNC-SG-78-07. 39 pp.

LeGrand, H. E., Jr. 1976. The nesting season: southern Atlantic coast region. Am. Birds 30:944.

LeGrand, H. E., Jr. 1983. The nesting season: southern Atlantic coast region. Am. Birds 37:979.

Massey, B. W. 1974. Breeding biology of the California Least Tern. Proc. Linn. Soc. NY 72:1–24.

Nisbet, I. C. T. 1973. Terns in Massachusetts: present numbers and historical changes. Bird Band. 44:27–55.

Nugent, P. 1974. Least Terns in a cantaloupe patch. Chat 38:72.

Portnoy, J. W., R. M. Erwin, and T. W. Custer. 1981. Atlas of gull and tern colonies: North Carolina to Key West, Florida (including pelicans, cormorants, and skimmers). U. S. Dept. Inter., Fish Wildl. Serv., Biol. Serv. Prog., FWS/OBS/-80/05.

Post, W., Jr. 1967. Least Tern nesting at Lake Marion, S.C. Chat 31:96–97.

Pough, R. H. 1951. Audubon Water Bird Guide. Doubleday and Company, Inc., Garden City, N.Y. 352 pp.

Rappole, J. H. 1981. Management possibilities for beach-nesting shorebirds in Georgia. *In* Proceedings of the Nongame and Endangered Wildlife

symposium, pp. 114–126, R. R. Odum and J. W. Guthrie, eds. Ga DNR. Tech. Bul. WL5.
Roche, S. M. 1979. Relative reporductive success of Least Tern colonies in the Charleston, South Carolina area. Report to the National Audubon Society Committee on Grants. 43 pp.
Sandifer, P. A., J. V. Miglarese, D. R. Calder, et al. 1980. Ecological characterization of the Sea Island coastal region of South Carolina and Georgia. Vol. III: Biological features of the characterization area. U. S. Fish and Wildlife Service, Office of Biological Services, Washington, D. C. FWS/OBS-79/42. 620 pp.
Savereno, L. A. 1992. Accuracy and precision of techniques used to census Least Tern nests. M.S. Thesis, Clemson Univ., Clemson, S. C. 83 pp.
Smith, E. D. 1961. Least Terns again nesting at Lake Murray, S. C. Chat 25:89.
South Carolina Colonial Waterbird Database. 1989. Unpubl. data. Nongame and Heritage Trust Section. South Carolina Dept. of Natural Resources, Rt. 2, Box 167, Green Pond, SC.
South Carolina Nongame and Heritage Trust Database. 1990. Unpubl. data. South Carolina Dept. of Natural Resources, Columbia. S. C.
Sprunt, A., Jr. 1929. Some abnormal breeding records from the South Carolina coast. Auk 46:555–556.
Teulings, R. P. 1971. The nesting season: southern Atlantic coast region. Am Birds 25:845.
Thompson, S. M. 1980. Report on the effects of human disturbance on the reproductive success of the Least Tern. Report to South Carolina Wildlife and Marine Resources Department, Columbia, SC. 42 pp.
Thompson, S. M. 1982. Least Tern studies. *In.* Gaddy, L. L., ed. Man's Impact on the Vegetation, Avifauna, and Hepetofauna of South Carolina's Barrier Islands: A Habitat Approach to Carrying Capacity. SC Wildl. Mar. Resour. Dept. publ.
Tomkins, I. R. 1959. Life history notes on the Least Tern. Wilson Bull. 71:313–322.
Wayne, A. T. 1910. Birds of South Carolina. Contrib. Charleston Mus. I.
Wolk, R. G. 1974. Reproductive behavior of the Least Tern. Proc. Linn. Soc. New York. 72:44–62.

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## 1994 North American Migration Day Count in North Carolina

ROBIN M. CARTER

The 1994 North American Migration Day Count in North Carolina, held, as usual, on the second Saturday in May (14 May 1994) resulted in counts being held in 12 counties around the state, from the mountains to the coast. These counties (by geographic region, with county seat) were:

| | |
|---|---|
| Coastal and Outer Coastal Plain: | |
| Brunswick | (Southport) |
| Craven | (New Bern) |
| Jones | (Trenton) |
| Inner Coastal Plain: | |
| Pitt | (Greenville) |
| Piedmont: | |
| Cleveland | (Shelby) |
| Guilford | (Greensboro) |
| Foothills and Piedmont: | |
| Polk | (Columbus) |
| Mountains: | |
| Alleghany | (Sparta) |
| Buncombe | (Asheville) |
| Cherokee | (Murphy) |
| Henderson | (Hendersonville) |
| Transylvania | (Brevard) |

In total, for the 1994 North American Migration Count in North Carolina, some 138 observers in 60 parties found 14,571 individual birds, of 183 species. Regular party-hours included 128.65 hours on foot, 207.25 hours by car, 10.5 hours by ATV (all-terrain vehicle), covering 107 miles on foot, 1746.8 miles by car, and 22 miles by ATV.

### RARITIES AND HIGH COUNTS:

In Brunswick County an amazing Iceland Gull was reported. The American Black Ducks were reported as "permanent residents". Are these birds feral, or perhaps they may be Mottled Ducks invading from South Carolina.

Counters in Guilford County found a Warbling Vireo, always a good find in the Carolinas away from their New River Valley breeding areas.

Pitt County birders located an Anhinga, a good find away from its breeding areas. The Henslow's Sparrows were in a well-known colony.

In Transylvania County a Purple Finch lingered at a feeder.

**Alleghany County, NC.** 4:30 AM to 2:00 PM. Wind calm. AM light rain; PM cloudy. Regular observers: 13 in field in 7 parties. Total regular party-hours 20; total regular party-miles 97; 13.5 hours and 12 miles on foot; 6.5 hours and 85 miles by car. Owling observers: 1 in 1 party. Owling party-hours 2; owling

party-miles 1. Feeder watchers: 3 at 3 feeding stations. Feeder watcher hours 15.5. Totals: 37.5 party-hours; 98 party-miles, 13 participants.

American Bittern 1, Great Blue Heron 4, Green Heron 6, Wood Duck 6, Mallard 3, Black Vulture 6, Turkey Vulture 40, Sharp-shinned Hawk 2, Cooper's Hawk 1, Red-shouldered Hawk 1, Red-tailed Hawk 2, Ruffed Grouse 2, Wild Turkey 23, Northern Bobwhite 5, Killdeer 19, Solitary Sandpiper 1, Spotted Sandpiper 6, Mourning Dove 58, Yellow-billed Cuckoo 1, Barn Owl 1, Eastern Screech-Owl 2, Great Horned Owl 2, Whip-poor-will 2, Chimney Swift 38, Ruby-throated Hummingbird 11, Belted Kingfisher 3, Red-bellied Woodpecker 11, Downy Woodpecker 7, Hairy Woodpecker 4, Northern Flicker (Yellow-shafted Flicker) 7, Pileated Woodpecker 9, Eastern Wood-Pewee 14, Acadian Flycatcher 12, Willow Flycatcher 2, Eastern Phoebe 22, Great Crested Flycatcher 2, Eastern Kingbird 17, Purple Martin 4, Tree Swallow 31, Northern Rough-winged Swallow 18, Barn Swallow 77, Blue Jay 30, American Crow 120, Common Raven 5, Carolina Chickadee 47, Tufted Titmouse 33, White-breasted Nuthatch 11, Carolina Wren 9, House Wren 3, Blue-gray Gnatcatcher 29, Eastern Bluebird 43, Wood Thrush 1, American Robin 46, Northern Mockingbird 9, Brown Thrasher 12, Cedar Waxwing 10, European Starling 123, White-eyed Vireo 4, Yellow-throated Vireo 4, Warbling Vireo 4, Red-eyed Vireo 18, Golden-winged Warbler 2, Northern Parula 23, Yellow Warbler 11, Chestnut-sided Warbler 6, Magnolia Warbler 1, Black-throated Blue Warbler 6, Yellow-rumped Warbler (Myrtle Warbler) 4, Black-throated Green Warbler 3, Black-and-white Warbler 6, American Redstart 4, Ovenbird 14, Northern Waterthrush 1, Common Yellowthroat 7, Hooded Warbler 2, Yellow-breasted Chat 1, Summer Tanager 1, Scarlet Tanager 2, Northern Cardinal 42, Indigo Bunting 79, Rufous-sided Towhee 36, Chipping Sparrow 43, Field Sparrow 21, Grasshopper Sparrow 4, Song Sparrow 56, Red-winged Blackbird 106, Eastern Meadowlark 17, Common Grackle 21, Brown-headed Cowbird 53, Orchard Oriole 2, Nothern Oriole (Baltimore Oriole) 2, House Finch 57, American Goldfinch 108, House Sparrow 4.

Total 94 species, 1789 individuals.

**Coordinator**: James Coman, Rt. 1, Box 182, Piney Creek, NC 28663.
Participants: Harrol Blevins, Jason Blevins, Velma Blevins, Michael Carpenter, Richard Carter, Billie F. Coman, J. H. Coman, Jr., James Coman, Amanda Elliott, Doris F. Greene, Katherine Higgins, Ruth F. McRary, Elizabeth Perot, Elizabeth Smith, Alice Wilson, Tom Wilson.

**Brunswick County, NC.** 6:30 AM to 8:30 PM. Temp 50 deg to 80 deg F. Wind W, 5 mph. AM partly cloudy; PM partly cloudy. Regular observers: 12 in field in 8 parties. Total regular party-hours 37.75; total regular party-miles 142; 14.75 hours and 13.5 miles on foot; 18.5 hours and 124.5 miles by car; 4.5 hours and 5 miles by ATV. Owling observers: 4 in 1 party. Owling party-hours 1.5; owling party-miles 5. Feeder watchers: 4 at 2 feeding stations. Feeder watcher hours 5. Totals: 44.25 party-hours; 147 party-miles, 12 participants.

Brown Pelican 107, Double-crested Cormorant 71, Great Blue Heron 13, Great Egret 156, Snowy Egret 25, Little Blue Heron 2, Tricolored Heron 5, Cattle Egret 2, Green Heron 25, Black-crowned Night-Heron 9, Yellow-crowned Night-Heron 4, White Ibis 15, Glossy Ibis 1, Canada Goose 6, Wood Duck 27, American Black Duck 5 (feral?), Mallard 6, Red-breasted Merganser

1, Black Vulture 2, Turkey Vulture 14, Osprey 36, Red-shouldered Hawk 3, Red-tailed Hawk 1, buteo sp. 1, Northern Bobwhite 12, Clapper Rail 5, Black-bellied Plover 59, Wilson's Plover 42, Semipalmated Plover 4, Killdeer 10, American Oystercatcher 12, Black-necked Stilt 1, Willet 70, Spotted Sandpiper 7, Whimbrel 21, Ruddy Turnstone 5, Red Knot 62, Sanderling 37, Semipalmated Sandpiper 8, Western Sandpiper 7, Least Sandpiper 2, peep sp. 24, Dunlin 60, Short-billed Dowitcher 93, Laughing Gull 64, Ring-billed Gull 51, Herring Gull 33, Iceland Gull 1 (adequate details), Royal Tern 66, Sandwich Tern 13, Forster's Tern 6, Least Tern 61, Black Skimmer 45, Rock Dove 23, Mourning Dove 182, Yellow-billed Cuckoo 22, Common Nighthawk 4, Chuck-will's-widow 10, Whip-poor-will 1, Chimney Swift 27, Ruby-throated Hummingbird 6, Red-headed Woodpecker 27, Red-bellied Woodpecker 40, Downy Woodpecker 6, Northern Flicker (Yellow-shafted Flicker) 25, Pileated Woodpecker 12, Eastern Wood-Pewee 7, Acadian Flycatcher 17, Great Crested Flycatcher 61, Eastern Kingbird 40, Purple Martin 99, Tree Swallow 1, Northern Rough-winged Swallow 13, Barn Swallow 150, Blue Jay 51, American Crow 44, Fish Crow 21, crow sp. 22, Carolina Chickadee 29, Tufted Titmouse 63, Brown-headed Nuthatch 27, Carolina Wren 67, Marsh Wren 2, Blue-gray Gnatcatcher 42, Eastern Bluebird 48, Wood Thrush 9, American Robin 22, Gray Catbird 1, Northern Mockingbird 80, Brown Thrasher 46, Loggerhead Shrike 8, European Starling 111, White-eyed Vireo 18, Yellow-throated Vireo 8, Red-eyed Vireo 14, Northern Parula 22, Yellow-throated Warbler 6, Pine Warbler 37, Prairie Warbler 7, Prothonotary Warbler 20, Swainson's Warbler 2, Ovenbird 3, Common Yellowthroat 13, Hooded Warbler 6, Yellow-breasted Chat 12, Summer Tanager 35, Scarlet Tanager 2, Northern Cardinal 102, Blue Grosbeak 11, Indigo Bunting 34, Painted Bunting 11, Rufous-sided Towhee 32, Chipping Sparrow 2, Field Sparrow 4, Seaside Sparrow 2, Red-winged Blackbird 70, Eastern Meadowlark 2, Boat-tailed Grackle 149, Common Grackle 83, Brown-headed Cowbird 64, Orchard Oriole 39, House Finch 2, American Goldfinch 4, House Sparrow 26.

Total 122 species, 3726 individuals.

**Coordinator**: Diane Hahn, 269 Sea Trail Drive, Sunset Beach, NC 28468.
Participants: Sue Baer, Judy Brown, Richard Brown, Carolyn Bush, Norman Bush, Hansi Cherry, Diane Hahn, David Harper, Marge Harper, Lynn Petch, Marcia Warring, Melba Williams.

**Buncombe County, NC.** 7:00 AM to 3:00 PM. Temp 58 deg to 75 deg F. Wind W, 4 to 7 mph. AM partly cloudy; PM partly cloudy. Regular observers: 2 in field in 1 party. Total regular party-hours 5; total regular party-miles 68; 3 hours and 1 mile on foot; 2 hours and 67 miles by car. Feeder watchers: 2 at 2 feeding stations. Feeder watcher hours 1. Totals: 6 party-hours; 68 party-miles, 2 participants.

Green Heron 1, Canada Goose 5, Mallard 1, Ring-necked Duck 1, Red-tailed Hawk 1, Killdeer 2, Spotted Sandpiper 3, Least Sandpiper 1, Rock Dove 10, Mourning Dove 5, Chimney Swift 5, Ruby-throated Hummingbird 2, Belted Kingfisher 1, Northern Flicker (Yellow-shafted Flicker) 2, Eastern Wood-Pewee 1, Least Flycatcher 1, Eastern Phoebe 1, Eastern Kingbird 5, Northern Rough-winged Swallow 5, Barn Swallow 6, Blue Jay 1, American Crow 9, Common Raven 1, Carolina Chickadee 7, Tufted Titmouse 9, House Wren 2,

Blue-gray Gnatcatcher 6, Wood Thrush 2, American Robin 8, Gray Catbird 3, Northern Mockingbird 7, Brown Thrasher 2, Cedar Waxwing 11, European Starling 10, Solitary Vireo 3, Yellow-throated Vireo 1, Red-eyed Vireo 10, Yellow Warbler 3, Chestnut-sided Warbler 10, Black-throated Blue Warbler 4, Blackburnian Warbler 2, Blackpoll Warbler 1, Cerulean Warbler 4, Black-and-white Warbler 3, American Redstart 5, Worm-eating Warbler 5, Ovenbird 6, Northern Waterthrush 1, Common Yellowthroat 4, Hooded Warbler 4, Canada Warbler 1, Scarlet Tanager 3, Northern Cardinal 6, Rose-breasted Grosbeak 2, Indigo Bunting 10, Rufous-sided Towhee 7, Chipping Sparrow 4, Field Sparrow 1, Grasshopper Sparrow 1, Song Sparrow 7, Dark-eyed Junco (Slate-colored) 4, Red-winged Blackbird 6, Eastern Meadowlark 4, Common Grackle 6, Orchard Oriole 3, Northern Oriole ( Baltimore Oriole) 2, Pine Siskin 2, American Goldfinch 9.

Total 68 species, 281 individuals.
**Coordinator**: Ruth Young, P.O. Box 836, Fairview, NC 28736.
Participants: Peggy Lasker, Ruth Young.

**Cherokee County, NC.** 8:30 AM to 4:30 PM. Temp 50 deg to 68 deg F. Wind W, 0 to 15 mph. AM light rain; PM light rain. Regular observers: 2 in field in 1 parties. Total regular party-hours 8; total regular party-miles 58; 4 hours and 2 miles on foot; 4 hours and 56 miles by car. Owling observers: 2 in 1 party. Owling party-hours 0.5; owling party-miles 0. Totals: 8.5 party-hours; 58 party-miles, 2 participants.

Canada Goose 8, Cooper's Hawk 1, Broad-winged Hawk 2, Red-tailed Hawk 1, Northern Bobwhite 2, Killdeer 1, Mourning Dove 20, Yellow-billed Cuckoo 1, Barred Owl 2, Whip-poor-will 1, Chimney Swift 16, Ruby-throated Hummingbird 3, Red-bellied Woodpecker 1, Downy Woodpecker 1, Northern Flicker (Yellow-shafted Flicker) 1, Pileated Woodpecker 5, Eastern Wood-Pewee 2, Eastern Phoebe 10, Great Crested Flycatcher 4, Purple Martin 8, Northern Rough-winged Swallow 22, Barn Swallow 6, Blue Jay 10, American Crow 13, Carolina Chickadee 18, Tufted Titmouse 16, Carolina Wren 7, House Wren 2, Eastern Bluebird 2, Wood Thrush 6, American Robin 12, Gray Catbird 2, Northern Mockingbird 2, Brown Thrasher 9, Cedar Waxwing 15, European Starling 26, Solitary Vireo 8, Red-eyed Vireo 7, Blue-winged Warbler 1, Northern Parula 8, Black-and-white Warbler 2, Ovenbird 2, Kentucky Warbler 1, Common Yellowthroat 1, Hooded Warbler 4, Yellow-breasted Chat 7, Scarlet Tanager 4, Northern Cardinal 20, Indigo Bunting 24, Rufous-sided Towhee 11, Song Sparrow 21, Red-winged Blackbird 7, Common Grackle 14, House Finch 8, American Goldfinch 2, House Sparrow 12.

Total 56 species, 422 individuals.
**Coordinators**: Bill & Jan Bolte, Rt. 2 Box 175A, Murphy, NC 28906.
Participants: Bill Bolte, Jan Bolte.

**Cleveland County, NC.** 7:30 AM to 11:45 AM. Temp 68 deg to 75 deg F. Wind SE, 10 mph. AM partly cloudy; PM partly cloudy. Regular observers: 3 in field in 1 party. Total regular party-hours 4.2; total regular party-miles 36; 1.9 hours and 2 miles on foot; 2.3 hours and 34 miles by car. Totals: 4.2 party-hours; 36 party-miles, 3 participants.

Green Heron 3, Canada Goose 18, Northern Bobwhite 1, Rock Dove 10, Mourning Dove 32, Barn Owl 1 (stakeout), Chimney Swift 23, Belted Kingfisher 1, Red-bellied Woodpecker 3, Northern Flicker ( Yellow-shafted Flicker) 2, Pileated Woodpecker 1, Eastern Phoebe 1, Great Crested Flycatcher 1, Eastern Kingbird 7, Purple Martin 14, Northern Rough-winged Swallow 5, Barn Swallow 9, Blue Jay 13, American Crow 20, Tufted Titmouse 1, Carolina Wren 3, House Wren 1, Blue-gray Gnatcatcher 4, Eastern Bluebird 15, American Robin 57, Gray Catbird 2, Northern Mockingbird 18, Brown Thrasher 5, European Starling 33, Red-eyed Vireo 7, Yellow Warbler 2, Magnolia Warbler 1, Pine Warbler 2, Common Yellowthroat 6, Yellow-breasted Chat 3, Summer Tanager 1, Northern Cardinal 12, Blue Grosbeak 8, Indigo Bunting 7, Rufous-sided Towhee 4, Chipping Sparrow 2, Field Sparrow 3, Grasshopper Sparrow 7, Song Sparrow 6, Bobolink 35, Red-winged Blackbird 4, Eastern Meadowlark 9, Common Grackle 50, Brown-headed Cowbird 1, Orchard Oriole 2, House Finch 5, House Sparrow 20.

Total 52 species, 501 individuals.

**Coordinator**: Patricia Wilkison, 213 Windsor Drive, Shelby, NC.
Participants: Jacquie Brunnick, Jo Ann Martin, Patricia Wilkison.

**Craven County, NC.** Temp 48 deg to 87 deg F. Wind NW, 5 to 10 mph. AM clear; PM clear. Regular observers: 7 in field in 1 party. Total regular party-hours 3; total regular party-miles 28.5; 0.5 hours and 0.5 miles on foot; 2.5 hours and 28 miles by car. Totals: 3 party-hours; 28.5 party-miles, 7 participants.

Canada Goose 2, Mallard 1, Turkey Vulture 8, Osprey 3, Red-shouldered Hawk 1, Northern Bobwhite 2, Mourning Dove 18, Yellow-billed Cuckoo 5, Ruby-throated Hummingbird 1, Red-bellied Woodpecker 1, Downy Woodpecker 2, Red-cockaded Woodpecker 2, Pileated Woodpecker 2, Eastern Wood-Pewee 8, Acadian Flycatcher 10, Great Crested Flycatcher 6, Blue Jay 2, American Crow 6, Carolina Chickadee 3, Tufted Titmouse 4, Brown-headed Nuthatch 4, Carolina Wren 2, European Starling 26, White-eyed Vireo 4, Yellow-throated Vireo 1, Red-eyed Vireo 3, Northern Parula 6, Yellow-throated Warbler 5, Pine Warbler 3, Prairie Warbler 6, Prothonotary Warbler 4, Ovenbird 3, Common Yellowthroat 6, Hooded Warbler 2, Summer Tanager 3, Northern Cardinal 3, Rufous-sided Towhee 6, Red-winged Blackbird 4, Common Grackle 3, Brown-headed Cowbird 9, House Sparrow 10.

Total 41 species, 200 individuals.

**Coordinator**: Nell Moore, 378 Francktown Road, Richlands, NC 28574.
Participants: Ann Forster, Alice Gordon, Augusta Haberyan, Henry Haberyan, Florence Margolin, Jimi Moore, Nell Moore.

**Guilford County, NC.** 4:15 AM to 5:30 PM. Regular observers: 29 in field in 14 parties. Total regular party-hours 91.7; total regular party-miles 529.8; 31 hours and 23.5 miles on foot; 60.7 hours and 506.3 miles by car. Owling observers: 1 in 1 party. Owling party-hours 1.75; owling party-miles 37.3. Totals: 93.45 party-hours; 567.1 party-miles, 29 participants.

Double-crested Cormorant 18, Great Blue Heron 4, Green Heron 9, Canada Goose 217, Wood Duck 11, Mallard 120, Black Vulture 4, Turkey Vulture 42, Osprey 1, Bald Eagle 3, Sharp-shinned Hawk 1, Cooper's Hawk 3, Red-shouldered Hawk 1, Broad-winged Hawk 3, Red-tailed Hawk 21, American

Kestrel 4, Northern Bobwhite 25, Killdeer 48, Solitary Sandpiper 4, Spotted Sandpiper 13, Least Sandpiper 6, Ring-billed Gull 3, Rock Dove 85, Mourning Dove 340, Yellow-billed Cuckoo 3, Great Horned Owl 5, Barred Owl 3, Common Nighthawk 5, Whip-poor-will 3, Chimney Swift 264, Ruby-throated Hummingbird 5, Belted Kingfisher 8, Red-headed Woodpecker 3, Red-bellied Woodpecker 62, Downy Woodpecker 17, Hairy Woodpecker 4, Northern Flicker (Yellow-shafted Flicker) 34, Pileated Woodpecker 1, Eastern Wood-Pewee 34, Acadian Flycatcher 10, Eastern Phoebe 56, Great Crested Flycatcher 30, Eastern Kingbird 45, Horned Lark 2, Purple Martin 84, Northern Rough-winged Swallow 17, Bank Swallow 1, Barn Swallow 175, Blue Jay 191, American Crow 176, Fish Crow 1, Carolina Chickadee 107, Tufted Titmouse 92, White-breasted Nuthatch 9, Brown-headed Nuthatch 3, Carolina Wren 159, House Wren 14, Blue-gray Gnatcatcher 47, Eastern Bluebird 325, Veery 1, Swainson's Thrush 22, Wood Thrush 73, American Robin 979, Gray Catbird 20, Northern Mockingbird 331, Brown Thrasher 77, Cedar Waxwing 167, Loggerhead Shrike 2, European Starling 425, White-eyed Vireo 4, Solitary Vireo 2, Yellow-throated Vireo 4, Warbling Vireo 1 (good details), Red-eyed Vireo 124, Northern Parula 2, Yellow Warbler 2, Magnolia Warbler 2, Cape May Warbler 3, Black-throated Blue Warbler 3, Yellow-rumped Warbler (Myrtle Warbler) 3, Pine Warbler 47, Prairie Warbler 10, Blackpoll Warbler 17, American Redstart 19, Ovenbird 4, Northern Waterthrush 1, Louisiana Waterthrush 1, Common Yellowthroat 78, Canada Warbler 1, Yellow-breasted Chat 15, Summer Tanager 9, Scarlet Tanager 16, Northern Cardinal 326, Rose-breasted Grosbeak 1, Blue Grosbeak 34, Indigo Bunting 212, Rufous-sided Towhee 82, Chipping Sparrow 113, Field Sparrow 82, Grasshopper Sparrow 19, Song Sparrow 60, White-throated Sparrow 1, Bobolink 65, Red-winged Blackbird 162, Eastern Meadowlark 174, Common Grackle 742, Brown-headed Cowbird 62, Orchard Oriole 15, Northern Oriole (Baltimore Oriole) 7, House Finch 143, American Goldfinch 113, House Sparrow 100.

Total 112 species, 7959 individuals.

**Coordinator**: Dennis Burnette, 4209 Bramlet Place, Greensboro, NC 27407. Participants: Carolyn Allen, Don Allen, Cindi Barrett, Dennis Burnette, Lynn Burnette, Charlie Campbell, Sue Cole, Phil Crisp, David Disher, Susan Disher, Grace Draper, Harold Draper, John Egan, Sharon Egan, Larry Gasper, Herb Hendrickson, Hop Hopkins, Elizabeth Link, Henry Link, Clarence Mattocks, James Mattocks, Jean McCoy, Lynn Moseley, Evelyn Schoonover, John Schoonover, Henry Strickland, Weslyn Strickland, Emily Tyler, Suzanne Wood-Ponting.

**Henderson County, NC.** Temp 65 deg F. Wind calm. AM cloudy. Regular observers: 1 in field in 1 party. Total regular party-hours 2; total regular party-miles 2.5; 2 hours and 2.5 miles on foot. Feeder watchers: 1 at 1 feeding station. Feeder watcher hours 2. Totals: 3 party-hours; 2.5 party-miles, 1 participant.

Wood Duck 8, Mallard 2, Mourning Dove 2, Chimney Swift 10, Red-bellied Woodpecker 3, Downy Woodpecker 2, Northern Flicker (Yellow-shafted Flicker) 1, Pileated Woodpecker 1, Eastern Wood-Pewee 1, Great Crested Flycatcher 1, Blue Jay 5, American Crow 2, Carolina Chickadee 5, Tufted Titmouse 3, Carolina Wren 1, House Wren 4, Eastern Bluebird 2,

Swainson's Thrush 2, Wood Thrush 5, American Robin 12, Gray Catbird 2, Brown Thrasher 4, Cedar Waxwing 21, European Starling 10, White-eyed Vireo 2, Red-eyed Vireo 3, American Redstart 1, Common Yellowthroat 2, Canada Warbler 1, Northern Cardinal 6, Indigo Bunting 1, Rufous-sided Towhee 7, Song Sparrow 5, Red-winged Blackbird 4, Common Grackle 4, House Finch 4.

Total 36 species, 149 individuals.

**Coordinator**: Simon Thompson, 111 Thermal View Drive, Tryon, NC 28782.
Participant: Wayne Forsythe.

**Jones County, NC.** 6:30 AM to 12:30 PM. Temp 48 deg to 87 deg F. Wind NW, 5 to 10 mph. AM clear; PM clear. Regular observers: 10 in field in 1 party. Total regular party-hours 6; total regular party-miles 65; 2.5 hours and 2 miles on foot; 3.5 hours and 63 miles by car. Totals: 6 party-hours; 65 party-miles, 10 participants.

Great Blue Heron 3, Mallard 1, Turkey Vulture 12, Red-shouldered Hawk 1, Northern Bobwhite 3, Mourning Dove 23, Yellow-billed Cuckoo 2, Chimney Swift 9, Ruby-throated Hummingbird 3, Red-bellied Woodpecker 1, Downy Woodpecker 4, Pileated Woodpecker 2, Eastern Wood-Pewee 6, Acadian Flycatcher 4, Great Crested Flycatcher 12, Eastern Kingbird 3, Purple Martin 12, Northern Rough-winged Swallow 4, Barn Swallow 3, Blue Jay 4, American Crow 13, Carolina Chickadee 6, Tufted Titmouse 3, Brown-headed Nuthatch 8, Carolina Wren 3, Blue-gray Gnatcatcher 11, Eastern Bluebird 13, Wood Thrush 4, American Robin 2, Gray Catbird 3 , Northern Mockingbird 12, Brown Thrasher 1, European Starling 17, White-eyed Vireo 8, Yellow-throated Vireo 2, Red-eyed Vireo 9, Northern Parula 8, Yellow-throated Warbler 9, Pine Warbler 3, Prairie Warbler 12, Prothonotary Warbler 8, Worm-eating Warbler 1, Ovenbird 5, Louisiana Waterthrush 3, Common Yellowthroat 14, Hooded Warbler 4, Summer Tanager 8, Scarlet Tanager 2, Northern Cardinal 4, Blue Grosbeak 3, Indigo Bunting 2, Rufous-sided Towhee 14, Red-winged Blackbird 5, Common Grackle 10, Brown-headed Cowbird 5, Orchard Oriole 1, American Goldfinch 6.

Total 57 species, 354 individuals.

**Coordinator**: Nell Moore, 378 Francktown Road, Richlands, NC 28574.
Participants: Ann Foster, Alice Gordon, Augusta Haberyan, Henry Haberyan, Charlotte Levine, Milton Levine, Florence Margolin, Nell Moore, Don Wood, Elinore Wood.

**Pitt County, NC.** 5:05 AM to 8:45 PM. Temp 45 deg to 82 deg F. Wind NW, 0 to 10 mph. AM partly cloudy; PM partly cloudy. Regular observers: 7 in field in 3 parties. Total regular party-hours 22.25; total regular party-miles 235.5; 8 hours and 9.5 miles on foot; 14.25 hours and 226 miles by car. Owling observers: 3 in 1 party. Owling party-hours 0.75; owling party-miles 4. Totals: 23 party-hours; 239.5 party-miles, 7 participants.

Common Loon 1, Double-crested Cormorant 6, Anhinga 1 (good details), Great Blue Heron 37, Great Egret 11, Snowy Egret 5, Green Heron 10, White Ibis 5, Wood Duck 16, American Black Duck 1, Mallard 8, Black Vulture 2, Turkey Vulture 37, Bald Eagle 2, Red-shouldered Hawk 10, Red-tailed Hawk 15, Northern Bobwhite 19, Killdeer 37, Solitary Sandpiper 2, Spotted

Sandpiper 11, Least Sandpiper 5, Rock Dove 31, Mourning Dove 199, Yellow-billed Cuckoo 9, Eastern Screech-Owl 2, Great Horned Owl 5, Barred Owl 2, Common Nighthawk 4, Chuck-will's-widow 7, Whip-poor-will 7, Chimney Swift 68, Ruby-throated Hummingbird 4, Belted Kingfisher 4, Red-headed Woodpecker 3, Red-bellied Woodpecker 20, Downy Woodpecker 10, Hairy Woodpecker 2, Northern Flicker (Yellow-shafted Flicker) 7, Pileated Woodpecker 7, Eastern Wood-Pewee 13, Acadian Flycatcher 27, Eastern Phoebe 1, Great Crested Flycatcher 47, Eastern Kingbird 33, Horned Lark 2, Purple Martin 22, Tree Swallow 4, Northern Rough-winged Swallow 30, Barn Swallow 131, Blue Jay 17, American Crow 91, Fish Crow 30, Carolina Chickadee 23, Tufted Titmouse 23, White-breasted Nuthatch 4, Brown-headed Nuthatch 4, Carolina Wren 50, Blue-gray Gnatcatcher 37, Eastern Bluebird 49, Wood Thrush 34, American Robin 37, Gray Catbird 5, Northern Mockingbird 76, Brown Thrasher 15, Cedar Waxwing 89, Loggerhead Shrike 10, European Starling 277, White-eyed Vireo 17, Yellow-throated Vireo 15, Red-eyed Vireo 14, Northern Parula 20, Yellow Warbler 1, Cape May Warbler 1, Yellow-throated Warbler 9, Pine Warbler 18, Prairie Warbler 19, Blackpoll Warbler 1, Black-and-white Warbler 1, American Redstart 2, Prothonotary Warbler 50, Worm-eating Warbler 2, Swainson's Warbler 3, Ovenbird 10, Louisiana Waterthrush 6, Kentucky Warbler 6, Common Yellowthroat 33, Hooded Warbler 10, Yellow-breasted Chat 35, Summer Tanager 12, Northern Cardinal 59, Blue Grosbeak 23, Indigo Bunting 97, Rufous-sided Towhee 16, Chipping Sparrow 15, Field Sparrow 21, Grasshopper Sparrow 4, Henslow's Sparrow 3 (excellent details), White-throated Sparrow 1, Red-winged Blackbird 62, Eastern Meadowlark 37, Common Grackle 361, Brown-headed Cowbird 10, Orchard Oriole 15, House Finch 19, American Goldfinch 21, House Sparrow 47.

Total 107 species, 2916 individuals.

**Coordinator**: Veronica Pantelidis, 106 Lakeview Drive, Greenville, NC 27858. Participants: Larry Auld, Ken Harrell, Mike Hoekstra, Dave Kaminski, Veronica Pantelidis, John Wright, Paula Wright.

**Polk County, NC.** 6:30 AM to 4:30 PM. Temp 62 deg to 74 deg F. Wind calm. AM cloudy; PM cloudy. Regular observers: 5 in field in 3 parties. Total regular party-hours 9; total regular party-miles 56; 1.5 hours and 1 mile on foot; 7.5 hours and 55 miles by car. Totals: 9 party-hours; 56 party-miles, 5 participants.

Green Heron 2, Canada Goose 1, Mallard 1, Turkey Vulture 10, Northern Bobwhite 1, Solitary Sandpiper 1, Rock Dove 3, Mourning Dove 22, Yellow-billed Cuckoo 1, Chimney Swift 28, Ruby-throated Hummingbird 1, Red-bellied Woodpecker 9, Downy Woodpecker 1, Hairy Woodpecker 2, Northern Flicker (Yellow-shafted Flicker) 1, Pileated Woodpecker 5, Eastern Wood-Pewee 8, Acadian Flycatcher 2, Eastern Phoebe 12, Great Crested Flycatcher 4, Eastern Kingbird 3, Northern Rough-winged Swallow 4, Blue Jay 9, American Crow 15, Carolina Chickadee 4, Tufted Titmouse 13, White-breasted Nuthatch 1, Carolina Wren 14, House Wren 2, Blue-gray Gnatcatcher 4, Eastern Bluebird 9, Veery 1, Swainson's Thrush 5, Wood Thrush 13, American Robin 19, Gray Catbird 7, Northern Mockingbird 3, Brown Thrasher 2, Cedar Waxwing 34, European Starling 14, White-eyed Vireo 2, Solitary Vireo 2, Yellow-throated Vireo 9, Red-eyed Vireo 49, Northern Parula 1, Yellow

Warbler 3, Magnolia Warbler 1, Black-throated Blue Warbler 3, Yellow-rumped Warbler ( Myrtle Warbler) 3, Black-throated Green Warbler 7, Yellow-throated Warbler 1, Pine Warbler 8, Blackpoll Warbler 13, Cerulean Warbler 3, Black-and-white Warbler 8, American Redstart 22, Worm-eating Warbler 4, Ovenbird 3, Northern Waterthrush 2, Louisiana Waterthrush 1, Kentucky Warbler 5, Common Yellowthroat 2, Hooded Warbler 12, Yellow-breasted Chat 1, Scarlet Tanager 18, Northern Cardinal 23, Rose-breasted Grosbeak 1, Blue Grosbeak 3, Indigo Bunting 44, Rufous-sided Towhee 13, Chipping Sparrow 1, Song Sparrow 9, Red-winged Blackbird 2, Eastern Meadowlark 3, Common Grackle 21, Brown-headed Cowbird 14, Orchard Oriole 2, Northern Oriole ( Baltimore Oriole) 5, House Finch 1, American Goldfinch 6.

Total 80 species, 622 individuals.

**Coordinator**: Simon Thompson, 111 Thermal View Drive, Tryon, NC 28782.
Participants: Oakley Smith, Reen Smith, Pam Thompson, Simon Thompson, Hillary Vinson, Zora Weisbecker.

**Transylvania County, NC.** 7:00 AM to 5:00 PM. Regular observers: 47 in field in 19 parties. Total regular party-hours 132.5; total regular party-miles 516.5; 46 hours and 37.5 miles on foot; 85.5 hours and 502 miles by car; 1 hour and 7 miles by ATV. Feeder watchers: 1 at 1 feeding station. Feeder watcher hours 6. Totals: 138.5 party-hours; 516.5 party-miles, 47 participants.

Green Heron 4, Canada Goose 33, Wood Duck 16, Mallard 29, Black Vulture 3, Turkey Vulture 71, Cooper's Hawk 2, Broad-winged Hawk 2, Red-tailed Hawk 1, American Kestrel 1, Ruffed Grouse 3, Wild Turkey 2, Northern Bobwhite 11, Killdeer 11, Solitary Sandpiper 2, Spotted Sandpiper 9, Rock Dove 3, Mourning Dove 194, Yellow-billed Cuckoo 1, Eastern Screech-Owl 1, Whip-poor-will 1, Chimney Swift 68, Ruby-throated Hummingbird 10, Belted Kingfisher 6, Red-bellied Woodpecker 12, Downy Woodpecker 12, Hairy Woodpecker 9, Northern Flicker (Yellow-shafted Flicker) 15, Pileated Woodpecker 50, Eastern Wood-Pewee 24, Acadian Flycatcher 28, Alder Flycatcher 2, Willow Flycatcher 12, Eastern Phoebe 97, Great Crested Flycatcher 22, Eastern Kingbird 4, Tree Swallow 4, Northern Rough-winged Swallow 63, Barn Swallow 157, Blue Jay 110, American Crow 248, Common Raven 6, Carolina Chickadee 106, Tufted Titmouse 126, Red-breasted Nuthatch 6, White-breasted Nuthatch 23, Carolina Wren 56, House Wren 14, Winter Wren 5, Golden- crowned Kinglet 2, Blue-gray Gnatcatcher 14, Eastern Bluebird 87, Veery 1, Wood Thrush 74, American Robin 344, Gray Catbird 134, Northern Mockingbird 29, Brown Thrasher 77, Cedar Waxwing 143, European Starling 214, White-eyed Vireo 8, Solitary Vireo 74, Yellow-throated Vireo 5, Red-eyed Vireo 183, Northern Parula 126, Yellow Warbler 18, Chestnut-sided Warbler 110, Magnolia Warbler 1, Black-throated Blue Warbler 94, Yellow-rumped Warbler ( Myrtle Warbler) 3, Black-throated Green Warbler 17, Blackburnian Warbler 17, Yellow-throated Warbler 6, Prairie Warbler 1, Palm Warbler 1, Blackpoll Warbler 3, Black-and-white Warbler 48, American Redstart 25, Worm-eating Warbler 6, Swainson's Warbler 5, Ovenbird 148, Louisiana Waterthrush 18, Kentucky Warbler 3, Common Yellowthroat 47, Hooded Warbler 152, Canada Warbler 7, Yellow-breasted Chat 10, Summer Tanager 3, Scarlet Tanager 98, Northern Cardinal

221, Rose-breasted Grosbeak 15, Blue Grosbeak 2, Indigo Bunting 155, Rufous-sided Towhee 275, Chipping Sparrow 43, Field Sparrow 10, Grasshopper Sparrow 3, Song Sparrow 222, White-throated Sparrow 2, Dark-eyed Junco (Slate-colored) 38, Red-winged Blackbird 66, Eastern Meadowlark 10, Common Grackle 143, Brown-headed Cowbird 40, Purple Finch 1 (good details), House Finch 56, Pine Siskin 7, American Goldfinch 117, House Sparrow 7.

Total 109 species, 5484 individuals.

**Coordinator**: Norma Siebenheller, 187 Glen Cannon Drive, Pisgah Forest, NC 28768.

Participants: Dorothy Badger, Elaine Badger, John Bauer, Ruth Blanchard, Dick Blee, Sylvia Blee, Pat Bohan, Jack Bronson, Midge Bronson, Don Duncan, Ruth Duncan, Marge Eaton, Bill Edmonds, Dick Fudge, Kathy Fudge, Ed Hathaway, Dorothy Hollis, Bill Hough III, Bill Hough IV, Jean Hough, Jack Hudson, Becky Huggins, John Huggins, Tom Joyce, Ruth Klock, Mary Ellen Lindley, Eleanora Lipton, Betty McIlwain, Carolyn Mills, Rick Mills, Susan Mitchell, Erika Parmi, Jim Plymire, Margery Plymire, Florence Rogers, Harry Sherwood, Mary Sherwood, Bill Siebenheller, Norma Siebenheller, Ginny Tener, Bill Thomas, Shirl Thomas, Dick Thorsell, John Tierney, Connie Updike, George Updike, Marilyn Westphal, Jennifer Wren.

## 1994 North American Migration Day Count in South Carolina

ROBIN M. CARTER

The 1994 North American Migration Day Count in South Carolina, held, as usual, on the second Saturday in May (14 May 1994) resulted in counts being held in 13 counties around the state, from the mountains to the coast. These counties (by geographic region, with county seat) were:

| | |
|---|---|
| Coastal and Outer Coastal Plain: | |
| Charleston | (Charleston) |
| Jasper | (Ridgeland) |
| Inner Coastal Plain: | |
| Barnwell | (Barnwell) |
| Clarendon | (Manning) |
| Hampton | (Hampton) |
| Piedmont and Inner Coastal Plain (i.e. Fall Line area): | |
| Lexington | (Lexington) |
| Richland | (Columbia) |
| Piedmont: | |
| Cherokee | (Gaffney) |
| Chester | (Chester) |
| Greenwood | (Greenwood) |
| Spartanburg | (Spartanburg) |
| Mountains and Piedmont: | |
| Greenville | (Greenville) |
| Oconee | (Walhalla) |

In total, for the 1994 North American Migration Count in South Carolina, some 112 observers in 46 parties found 28,103 individual birds, of 204 species. Regular party-hours included 214.05 hours on foot, 97.4 hours by car, 1.5 hours by boat, and 1.5 hours by canoe, covering 172.5 miles on foot, 1620 miles by car, 1.25 miles by boat, and 2 miles by canoe.

RARITIES AND HIGH COUNTS:

Charleston County observers found two Long-billed Curlews, a good find at any time of year. Also noted where several wintering species late in leaving the coast, including Yellow-bellied Sapsucker, Eastern Phoebe, Hermit Thrush, and Rusty Blackbird. The Willow Flycatchers were described as acting like a territorial pair, but could not be relocated after the count.

In Cherokee County the count covered just the Cowpens National Battlefield area. Lyle Campbell found an amazing 160 Cedar Waxwings feeding on mulberries in the park, and raised the possiblility of local breeding.

Chester County observers reported at least 2000 Cliff Swallows in that county, which is probably a low estimate. This species is now breeding under bridges along US 21 and Interstate 77, away from water, as well as under bridges over the Catawba River and its tributaries. Where else (aside from neighboring Fairfield County) are Cliff Swallows now breeding away from water?

The Greenville County effort this year was confined to a boat party on Lake Lanier, in the foothills near the North Carolina border. The Northern (Baltimore) Oriole reported may have been on territory.

There were no large number of shorebirds reported from Jasper County this year, mainly because the Savannah spoil site was mostly dry.

Good finds on the Lexington County count included a Gray-cheeked Thrush and a nice male Wilson's Warbler. Both species have become quite rare in recent years -- neotropical migrants in trouble?

Counters in the Blue Ridge foothills of Oconee County, in extreme northwest South Carolina, found a King Rail and 25 species of warblers.

In Richland County Caroline Eastman located two dowitchers at Lake Catherine, in a suburban neighborhood of Columbia, a good find locally. The Solitary Vireo was on territory, not a migrant.

In rural Spartanburg County counters found a couple of Brewer's Blackbirds, an amazing find so late in the season, and a good find any time of year. The Willow Flycatchers were found in the breeding colony along the North Pacolet River, near the North Carolina border. This is the only known current breeding area for this species in the state.

**Barnwell County, SC**. 7:00 AM to 11:30 AM. Temp 55 deg. to 78 deg. F. Wind calm. AM clear. PM clear. Regular observers: 1 in field in 1 party. Total regular party-hours 4.5; total regular party-miles 7; 3.5 hours and 2 miles on

foot, 1 hour and 5 miles by car. Totals: 4.5 party-hours, 7 party-miles, 1 participant.

Anhinga 1, Great Blue Heron 2, Cattle Egret 2, Green Heron 4, Wood Duck 1, Northern Bobwhite 2, Spotted Sandpiper 8, Rock Dove 2, Mourning Dove 16, Yellow-billed Cuckoo 4, Barred Owl 1, Chuck-will's-widow 2, Chimney Swift 8, Belted Kingfisher 1, Red-headed Woodpecker 3, Red-bellied Woodpecker 4, Downy Woodpecker 2, Pileated Woodpecker 3, Eastern Wood-Pewee 7, Acadian Flycatcher 4, Great Crested Flycatcher 12, Eastern Kingbird 2, Blue Jay 8, American Crow 7, Carolina Chickadee 2, Tufted Titmouse 8, Carolina Wren 10, Blue-gray Gnatcatcher 10, Wood Thrush 5, American Robin 2, Northern Mockingbird 4, Brown Thrasher 3, Loggerhead Shrike 3, European Starling 16, White-eyed Vireo 6, Yellow-throated Vireo 1, Red-eyed Vireo 3, Northern Parula 10, Prothonotary Warbler 2, Louisiana Waterthrush 8, Common Yellowthroat 1, Yellow-breasted Chat 2, Summer Tanager 4, Northern Cardinal 6, Blue Grosbeak 1, Field Sparrow 1, Red-winged Blackbird 6, Eastern Meadowlark 3, Common Grackle 6, Brown-headed Cowbird 2.

Total: 50 species, 231 individuals.

**Coordinator**: Henry Fuseler, 2609 Bendemeer, Columbia, SC 29209.
Participant: Henry Fuseler

**Charleston County, SC.** 4:30 AM to 8:45 PM. Temp 57 deg. to 78 deg. F. Wind E, 0 to 7 mph. AM clear; PM clear. Regular observers: 20 in field in 6 parties. Total regular party-hours 51; total regular party-miles 266.5; 39.5 hours and 36.5 miles on foot; 11.5 hours and 230 miles by car. Owling observers: 11 in 2 parties. Owling party-hours 3.5; owling party-miles 1.5. Feeder watchers: 6 at 5 feeding stations. Feeder watcher hours 1.75. Totals: 67.75 party-hours; 268 party-miles, 20 participants.

Pied-billed Grebe 1, Northern Gannet 1, Brown Pelican 252, Double-crested Cormorant 44, Anhinga 71, Least Bittern 7, Great Blue Heron 23, Great Egret 257, Snowy Egret 41, Little Blue Heron 72, Tricolored Heron 27, Cattle Egret 25, Green Heron 87, Black-crowned Night-Heron 32, Yellow-crowned Night-Heron 2, White Ibis 9, Glossy Ibis 33, Wood Stork 14, Canada Goose 10, Wood Duck 88, American Black Duck 14, Mottled Duck 28, Mallard 28, Blue-winged Teal 5, Black Vulture 41, Turkey Vulture 39, Osprey 25, American Swallow-tailed Kite 7, Mississippi Kite 11, Bald Eagle 4, Northern Harrier 1, Red-shouldered Hawk 11, Red-tailed Hawk 12, American Kestrel 3, Northern Bobwhite 14, Clapper Rail 45, Sora 1, Common Moorhen 38, Black-bellied Plover 38, Wilson's Plover 3, Semipalmated Plover 121, Killdeer 20, American Oystercatcher 8, Black-necked Stilt 173, Greater Yellowlegs 11, Lesser Yellowlegs 1, Solitary Sandpiper 5, Willet 29, Spotted Sandpiper 17, Whimbrel 95, Long-billed Curlew 2 (good details), Marbled Godwit 1, Ruddy Turnstone 23, Red Knot 201, Sanderling 33, Semipalmated Sandpiper 12, Least Sandpiper 33, White-rumped Sandpiper 2, peep sp. 700, Dunlin 120, Short-billed Dowitcher 150, Common Snipe 1, American Woodcock 2, Laughing Gull 220, Ring-billed Gull 57, Herring Gull 5, Gull-billed Tern 18, Caspian Tern 8, Royal Tern 12, Common Tern 15, Forster's Tern 12, Least Tern 88, Black Skimmer 3, Rock Dove 239, Mourning Dove 196, Black-billed Cuckoo 1, Yellow-billed Cuckoo 38, Eastern Screech-Owl 3, Great Horned Owl 2, Barred Owl 10, Common Nighthawk 1, Chuck-will's-widow 54, Whip-poor-

will 8, Chimney Swift 233, Ruby-throated Hummingbird 20, Red-headed Woodpecker 58, Red-bellied Woodpecker 118, Yellow-bellied Sapsucker 1 (fair details), Downy Woodpecker 12, Hairy Woodpecker 1, Red-cockaded Woodpecker 6, Northern Flicker (Yellow-shafted Flicker) 7, Pileated Woodpecker 35, Eastern Wood-Pewee 24, Acadian Flycatcher 32, Willow Flycatcher 2 (good details), Empidonax sp. 3, Eastern Phoebe 1 (no details), Great Crested Flycatcher 387, Eastern Kingbird 27, Purple Martin 151, Tree Swallow 31, Northern Rough-winged Swallow 9, Bank Swallow 2, Barn Swallow 152, Blue Jay 48, American Crow 72, Fish Crow 55, crow sp. 15, Carolina Chickadee 113, Tufted Titmouse 71, White-breasted Nuthatch 5, Brown-headed Nuthatch 5, Carolina Wren 134, Marsh Wren 6, Blue-gray Gnatcatcher 96, Eastern Bluebird 34, Hermit Thrush 1 (no details), Wood Thrush 17, American Robin 7, Gray Catbird 5, Northern Mockingbird 164, Brown Thrasher 46, Loggerhead Shrike 7, European Starling 61, White-eyed Vireo 94, Yellow-throated Vireo 15, Red-eyed Vireo 61, Blue-winged Warbler 1, Northern Parula 99, Yellow-rumped Warbler (Myrtle Warbler) 1, Black-throated Green Warbler 4, Yellow-throated Warbler 40, Pine Warbler 53, Prairie Warbler 44, Prothonotary Warbler 54, Ovenbird 2, Kentucky Warbler 15, Common Yellowthroat 111, Hooded Warbler 14, Yellow-breasted Chat 56, Summer Tanager 73, Northern Cardinal 269, Blue Grosbeak 44, Indigo Bunting 48, Painted Bunting 51, Rufous-sided Towhee 106, Bachman's Sparrow 6, Seaside Sparrow 24, Song Sparrow 2, Swamp Sparrow 2, Bobolink 254, Red-winged Blackbird 632, Rusty Blackbird 4 (good details), Boat-tailed Grackle 237, Common Grackle 326, Brown-headed Cowbird 81, Orchard Oriole 86, Northern Oriole (Baltimore Oriole) 4, House Sparrow 56.

Total: 157 species, 9457 individuals.

**Coordinator**: Perry Nugent, 2260 Dallerton Circle, Charleston, SC 29414.
Participants: Michaelle K. Aldenderfer, Gifford Beaton, Sharon L. Brown, Joan Cole, Edward Conradi, Sandra Conradi, Fernanda Hastie, Tom Hilton, Ann Kent, Anne B. Knight, Holland Mills, Perry Nugent, Ernie Prupis, Joe Stevenot, Martha Stevenot, Betty Stringfellow, Sarah Taylor, Charles E. Walters, Ben Ward, Paulette Wingard.

**Cherokee County, SC.** 5:00 PM to 8:00 PM. Temp 75 deg. F. Wind SE, 4 mph. PM partly cloudy. Regular observers: 1 in field in 1 party. Total regular party-hours 3; total regular party-miles 11; 2.75 hours and 3 miles on foot; 0.25 hours and 8 miles by car. Totals: 3 party-hours; 11 party-miles, 1 participant.

Canada Goose 4, Northern Bobwhite 4, Mourning Dove 2, Chimney Swift 2, Red-bellied Woodpecker 2, Pileated Woodpecker 1, Purple Martin 15, Barn Swallow 1, Carolina Wren 4, Eastern Bluebird 3, American Robin 6, Gray Catbird 1, Northern Mockingbird 4, Brown Thrasher 2, Cedar Waxwing 160, European Starling 2, Red-eyed Vireo 3, Prairie Warbler 3, Common Yellowthroat 8, Yellow-breasted Chat 9, Northern Cardinal 3, Indigo Bunting 12, Rufous-sided Towhee 4, Chipping Sparrow 6, Field Sparrow 5, Song Sparrow 1, Eastern Meadowlark 4.

Total 27 species, 271 individuals.

**Coordinator**: Lyle Campbell, 126 Greengate Lane, Spartanburg, SC 29307.
Participant: Lyle Campbell.

**Chester County, SC.** 4:30 AM to 8:45 PM. Temp 59 deg. to 78 deg. F. Wind SE, 0 to 5 mph. AM cloudy; PM partly cloudy. Regular observers: 5 in field in 3 parties. Total regular party-hours 31.75; total regular party-miles 310; 24.5 hours and 24 miles on foot; 7.25 hours and 286 miles by car. Owling observers: 3 in 2 parties. Owling party-hours 2; owling party-miles 0.5. Totals: 33.75 party-hours; 286.5 party-miles, 5 participants.

Pied-billed Grebe 1, Great Blue Heron 3, Green Heron 8, Canada Goose 32, Wood Duck 2, Mallard 7, Black Vulture 13, Turkey Vulture 10, Osprey 1, Bald Eagle 1, Red-tailed Hawk 2, Northern Bobwhite 51, Killdeer 10, Spotted Sandpiper 2, Rock Dove 7, Mourning Dove 132, Yellow-billed Cuckoo 3, Barn Owl 1 (stakeout), Great Horned Owl 3, Barred Owl 4, Common Nighthawk 1, Chuck-will's-widow 7, Whip-poor-will 8, Chimney Swift 87, Ruby-throated Hummingbird 1, Belted Kingfisher 1, Red-bellied Woodpecker 5, Downy Woodpecker 6, Hairy Woodpecker 1, Pileated Woodpecker 4, Eastern Wood-Pewee 3, Acadian Flycatcher 2, Eastern Phoebe 13, Great Crested Flycatcher 12, Eastern Kingbird 49, Purple Martin 5, Northern Rough-winged Swallow 4, Cliff Swallow 2000, Barn Swallow 128, Blue Jay 3, American Crow 119, Fish Crow 23, Carolina Chickadee 15, Tufted Titmouse 8, Brown-headed Nuthatch 2, Carolina Wren 12, Ruby-crowned Kinglet 1, Blue-gray Gnatcatcher 10, Eastern Bluebird 90, Wood Thrush 2, American Robin 53, Gray Catbird 2, Northern Mockingbird 127, Brown Thrasher 10, Loggerhead Shrike 1, European Starling 217, White-eyed Vireo 10, Red-eyed Vireo 10, Tennessee Warbler 1, Northern Parula 22, Yellow-throated Warbler 4, Pine Warbler 20, Prairie Warbler 23, Prothonotary Warbler 7, Louisiana Waterthrush 1, Common Yellowthroat 2, Hooded Warbler 6, Yellow-breasted Chat 7, Summer Tanager 7, Northern Cardinal 84, Blue Grosbeak 7, Indigo Bunting 9, Rufous-sided Towhee 30, Chipping Sparrow 18, Field Sparrow 1, Song Sparrow 1, Red-winged Blackbird 117, Eastern Meadowlark 58, Common Grackle 257, Brown-headed Cowbird 15, Orchard Oriole 5, House Finch 7, House Sparrow 2.

Total 83 species, 4056 individuals.

**Coordinator**: Albert E. Conway, 1672 Deer Run Road, Catawba, SC 29704.
Participants: Albert Conway, Gail B. Ice, Gail C. Ice, Faye Metzl, Roy Turner.

**Clarendon County, SC.** 8:15 AM to 4:15 PM. Temp 55 deg. to 85 deg. F. Wind calm. AM clear; PM clear. Regular observers: 9 in field in 1 party. Total regular party-hours 7.5; total regular party-miles 13; 7 hours and 6 miles on foot; 0.5 hours and 7 miles by car. Totals: 7.5 party-hours; 13 party-miles, 9 participants.

Pied-billed Grebe 1, Double-crested Cormorant 30, Anhinga 5, Great Blue Heron 4, Great Egret 6, Little Blue Heron 2, Green Heron 10, Wood Duck 20, Mallard 2, Blue-winged Teal 1, Turkey Vulture 10, Osprey 6, Broad-winged Hawk 1, Red-tailed Hawk 1, Northern Bobwhite 4, large rail sp. 1, Common Moorhen 10, American Coot 2, Killdeer 1, Spotted Sandpiper 6, Ring-billed Gull 8, Caspian Tern 1, Mourning Dove 12, Yellow-billed Cuckoo 3, Chimney Swift 12, Ruby-throated Hummingbird 2, Belted Kingfisher 2, Red-headed Woodpecker 4, Red-bellied Woodpecker 5, Downy Woodpecker 2, Pileated Woodpecker 1, Eastern Wood-Pewee 1, Great Crested Flycatcher 7. Eastern Kingbird 20, Purple Martin 2, Northern Rough-winged Swallow 5, Barn Swallow 7, Blue Jay 2, American Crow 3, Fish Crow 2, crow sp. 25, Carolina

Chickadee 6, Tufted Titmouse 4, Carolina Wren 6, House Wren 1, Blue-gray Gnatcatcher 1, Eastern Bluebird 2, Wood Thrush 1, American Robin 2, Northern Mockingbird 4, Brown Thrasher 6, Loggerhead Shrike 2, European Starling 10, White-eyed Vireo 7, Red-eyed Vireo 3, Northern Parula 2, Pine Warbler 1, Prothonotary Warbler 2, Common Yellowthroat 1, Yellow-breasted Chat 1, Summer Tanager 10, Northern Cardinal 12, Blue Grosbeak 3, Indigo Bunting 2, Painted Bunting 1, Rufous-sided Towhee 2, Bobolink 3, Red-winged Blackbird 126, Eastern Meadowlark 6, Common Grackle 25, Brown-headed Cowbird 3, Orchard Oriole 27, House Sparrow 8.

Total 72 species, 539 individuals.

**Coordinator**: Bruce Smart, 1702 B Barr Road, Lexington, SC 29072.
Participants: Nancy Butler, James Glathar, Nancy Lyman, Cedric Marsh, Eileen Marsh, Jim McCormac, Rupert McCormac, Bruce Smart, Gary Sowell.

**Greenville County, SC.** 10:30 AM to 12:00 PM. Temp 67 deg. F. Wind calm. AM cloudy. Regular observers: 2 in field in 1 party. Total regular party-hours 1.5; total regular party-miles 1.25; 1.5 hours and 1.25 miles by boat. Totals: 1.5 party-hours; 1.25 party-miles, 2 participants.

Canada Goose 8, Mallard 4, Mourning Dove 10, Ruby-throated Hummingbird 2, Red-bellied Woodpecker 3, Pileated Woodpecker 2, Eastern Kingbird 2, Barn Swallow 11, Carolina Chickadee 3, Tufted Titmouse 6, White-breasted Nuthatch 1, Carolina Wren 2, Eastern Bluebird 6, American Robin 2, Brown Thrasher 1, Northern Cardinal 2, Common Grackle 20, Brown-headed Cowbird 1, Northern Oriole (Baltimore Oriole) 1, American Goldfinch 4.

Total 20 species, 91 individuals.

**Coordinator**: Simon Thompson, 111 Thermal View Drive, Tryon, NC 28782.
Participants: Cope Moss, Paul Squires.

**Greenwood County, SC.** 6:00 AM to 8:00 PM. Temp 55 deg. to 80 deg. F. Wind SW, 5 mph. AM cloudy. PM partly cloudy. Regular observers: 1 in field in 1 party. Total regular party-hours 14; total regular party-miles 160; 9 hours and 10 miles on foot, 5 hours and 150 miles by car. Totals: 14 party-hours, 160 party-miles, 1 participant.

Double-crested Cormorant 1, Great Blue Heron 2, Green Heron 2, Canada Goose 7, Wood Duck 7, Mallard 1, Black Vulture 4, Turkey Vulture 6, Osprey 1, Red-shouldered Hawk 1, Broad-winged Hawk 1, Red-tailed Hawk 2, Northern Bobwhite 1, Killdeer 1, Spotted Sandpiper 1, Rock Dove 30, Mourning Dove 50, Yellow-billed Cuckoo 2, Chimney Swift 67, Ruby-throated Hummingbird 2, Belted Kingfisher 1, Red-headed Woodpecker 2, Red-bellied Woodpecker 4, Downy Woodpecker 7, Northern Flicker (Yellow-shafted Flicker) 1, Pileated Woodpecker 2, Eastern Wood-Pewee 4, Acadian Flycatcher 2, Eastern Phoebe 20, Great Crested Flycatcher 10, Eastern Kingbird 1, Purple Martin 1, Northern Rough-winged Swallow 6, Barn Swallow 124, Blue Jay 5, American Crow 20, Fish Crow 3, Carolina Chickadee 14, Tufted Titmouse 24, Brown-headed Nuthatch 7, Carolina Wren 14, Blue-gray Gnatcatcher 34, Eastern Bluebird 25, Wood Thrush 1, American Robin 20, Northern Mockingbird 30, Brown Thrasher 10, European Starling 40, White-eyed Vireo 10, Yellow-throated Vireo 3, Red-eyed Vireo 20, Northern Parula

10, Yellow Warbler 1, Yellow-throated Warbler 3. Pine Warbler 24, Prairie Warbler 3, Blackpoll Warbler 1, Black-and-white Warbler 6, American Redstart 4, Kentucky Warbler 2, Common Yellowthroat 10, Hooded Warbler 1, Yellow-breasted Chat 14, Summer Tanager 19, Scarlet Tanager 1, Northern Cardinal 47, Blue Grosbeak 2, Indigo Bunting 18, Rufous-sided Towhee 10, Chipping Sparrow 7, Field Sparrow 6, Red-winged Blackbird 4, Eastern Meadowlark 12, Common Grackle 70, Brown-headed Cowbird 3, Orchard Oriole 1, American Goldfinch 5, House Sparrow 4.

Total 78 species, 942 individuals.

**Coordinator**: Bob Wood, 117 Michael Road, Blythewood, SC 29016.
Participant: Bob Wood.

**Hampton County, SC.** 6:30 AM to 5:45 PM. Temp 77 deg. to 94 deg. F. Wind calm. AM partly cloudy. PM clear. Regular observers: 1 in field in 1 party. Total regular party-hours 10.7; total regular party-miles 100; 4.8 hours and 5 miles on foot, 5.9 hours and 100 miles by car. Totals: 10.7 party-hours, 100 party-miles, 1 participant.

Pied-billed Grebe 1, Anhinga 8, Great Blue Heron 7, Great Egret 16, Little Blue Heron 11, Cattle Egret 12, Yellow-crowned Night-Heron 2, White Ibis 22, Wood Stork 5, Wood Duck 2, Black Vulture 11, Turkey Vulture 35, Mississippi Kite 3, Red-shouldered Hawk 1, Northern Bobwhite 7, Purple Gallinule 1, Common Moorhen 7, Killdeer 2, Spotted Sandpiper 1, Rock Dove 15, Mourning Dove 26, Yellow-billed Cuckoo 4, Chimney Swift 23, Ruby-throated Hummingbird 2, Red-headed Woodpecker 10, Red-bellied Woodpecker 11, Pileated Woodpecker 1, Eastern Wood-Pewee 4, Great Crested Flycatcher 14, Eastern Kingbird 23, Purple Martin 6, Northern Rough-winged Swallow 5, Barn Swallow 20, Blue Jay 8, American Crow 6, Fish Crow 5, crow sp. 20, Carolina Chickadee 2, Tufted Titmouse 3, White-breasted Nuthatch 4, Brown-headed Nuthatch 10, Blue-gray Gnatcatcher 6, Eastern Bluebird 22, American Robin 1, Gray Catbird 2, Northern Mockingbird 42, Brown Thrasher 17, Loggerhead Shrike 7, European Starling 20, White-eyed Vireo 4, Red-eyed Vireo 1, Northern Parula 2, Yellow-throated Warbler 3, Prairie Warbler 2, Prothonotary Warbler 1, Common Yellowthroat 1, Yellow-breasted Chat 3, Summer Tanager 5, Northern Cardinal 40, Blue Grosbeak 7, Indigo Bunting 4, Painted Bunting 1, Rufous-sided Towhee 8, Red-winged Blackbird 25, Eastern Meadowlark 1, Common Grackle 34, Brown-headed Cowbird 6, Orchard Oriole 8, House Finch 2, House Sparrow 8.

Total 69 species, 659 individuals.

**Coordinator**: Carroll Richard, P.O. Box 893, Hampton, SC 29924.
Participant: Carroll Richard.

**Jasper County, SC.** 6:30 AM to 8:30 PM. Temp 65 deg. to 82 deg. F. Wind W, 5 to 10 mph. AM partly cloudy; PM partly cloudy. Regular observers: 14 in field in 7 parties. Total regular party-hours 39; total regular party-miles 72; 27.5 hours and 23 miles on foot; 11.5 hours and 49 miles by car. Totals: 39 party-hours; 72 party-miles, 14 participants.

Pied-billed Grebe 1, Double-crested Cormorant 7, Anhinga 73, Least Bittern 5, Great Blue Heron 49, Great Egret 174, Snowy Egret 143, Little Blue Heron 28, Tricolored Heron 40, Cattle Egret 107, Green Heron 75, Black-

crowned Night-Heron 21, Yellow-crowned Night-Heron 4, night-heron sp. 4, White Ibis 12, Glossy Ibis 2, Wood Stork 14, Wood Duck 57, Northern Shoveler 1, Ring-necked Duck 1, Black Vulture 33, Turkey Vulture 58, Osprey 3, Mississippi Kite 4, Bald Eagle 6, Sharp-shinned Hawk 1, Red-shouldered Hawk 3, Red-tailed Hawk 9, Merlin 1, Northern Bobwhite 14, Clapper Rail 5, Purple Gallinule 12, Common Moorhen 101, American Coot 5, Wilson's Plover 4, Killdeer 14, Black-necked Stilt 6, Lesser Yellowlegs 2, Solitary Sandpiper 1, Willet 11, Pectoral Sandpiper 1, Ring-billed Gull 1, Forster's Tern 2, Least Tern 139, Rock Dove 15, Mourning Dove 81, Common Ground-Dove 1, Yellow-billed Cuckoo 20, Great Horned Owl 3, Barred Owl 2, Common Nighthawk 8, Chuck-will's-widow 3, Chimney Swift 45, Ruby-throated Hummingbird 5, Belted Kingfisher 1, Red-headed Woodpecker 4, Red-bellied Woodpecker 51, Downy Woodpecker 6, Northern Flicker (Yellow-shafted Flicker) 3, Pileated Woodpecker 22, Eastern Wood-Pewee 26, Acadian Flycatcher 4, Great Crested Flycatcher 93, Eastern Kingbird 51, Purple Martin 23, Tree Swallow 11, Barn Swallow 113, Blue Jay 27, American Crow 61, Fish Crow 25, Carolina Chickadee 26, Tufted Titmouse 65, White-breasted Nuthatch 8, Brown-headed Nuthatch 1, Carolina Wren 35, Blue-gray Gnatcatcher 68, Eastern Bluebird 22, Veery 1, Wood Thrush 22, American Robin 10, Gray Catbird 14, Northern Mockingbird 35, Brown Thrasher 31, Loggerhead Shrike 2, European Starling 13, White-eyed Vireo 64, Yellow-throated Vireo 9, Red-eyed Vireo 21, Northern Parula 76, Yellow-rumped Warbler (Myrtle Warbler) 1, Black-throated Green Warbler 1, Yellow-throated Warbler 21, Pine Warbler 22, American Redstart 3, Prothonotary Warbler 17, Common Yellowthroat 59, Hooded Warbler 1, Yellow-breasted Chat 1, Summer Tanager 27, Northern Cardinal 59, Blue Grosbeak 9, Indigo Bunting 16, Painted Bunting 17, Rufous-sided Towhee 24, Swamp Sparrow 1, Bobolink 161, Red-winged Blackbird 556, Eastern Meadowlark 1, Boat-tailed Grackle 302, Common Grackle 84, Brown-headed Cowbird 44, Orchard Oriole 28, House Sparrow 3.

Total 114 species, 3951 individuals.

**Coordinator**: Tom Smith, 313 Abercorn Street, Savannah, GA 31401.
Participants: Vic Carpenter, Graham Dugas, Bill Lovejoy, Martha Lovejoy, Barry Lowes, Philomena Lowes, Tom Nichols, Robin North, Alexander Roe, Jake Rust, Tom Smith, John Stafford, Janet Throne.

**Lexington County, SC.** 7:30 AM to 8:00 PM. Temp 63 deg. to 84 deg. F. Wind calm. AM clear; PM clear. Regular observers: 6 in field in 4 parties. Total regular party-hours 21.5; total regular party-miles 63.5; 17.5 hours and 13.5 miles on foot; 4 hours and 50 miles by car. Feeder watchers: 1 at 1 feeding station. Feeder watcher hours 1. Totals: 22.5 party-hours; 63.5 party-miles, 6 participants.

Double-crested Cormorant 1, Great Blue Heron 2, Little Blue Heron 1, Green Heron 1, Canada Goose 2, Wood Duck 5, Turkey Vulture 1, Red-tailed Hawk 3, Northern Bobwhite 2, Killdeer 6, Spotted Sandpiper 1, Rock Dove 2, Mourning Dove 25, Yellow-billed Cuckoo 1, Great Horned Owl 1, Chuck-will's-widow 5, Chimney Swift 58, Ruby-throated Hummingbird 4, Belted Kingfisher 2, Red-headed Woodpecker 2, Red-bellied Woodpecker 20, Downy Woodpecker 8, Hairy Woodpecker 1, Northern Flicker (Yellow-shafted

Flicker) 4, Pileated Woodpecker 5, Eastern Wood-Pewee 6, Acadian Flycatcher 1, Great Crested Flycatcher 14, Eastern Kingbird 3, Purple Martin 13, Northern Rough-winged Swallow 3, Barn Swallow 22, Blue Jay 43, American Crow 22, Fish Crow 9, Carolina Chickadee 29, Tufted Titmouse 35, Brown-headed Nuthatch 15, Carolina Wren 29, Blue-gray Gnatcatcher 13, Eastern Bluebird 3, Gray-cheeked Thrush 1 (good details), Swainson's Thrush 1, Wood Thrush 4, American Robin 25, Gray Catbird 6, Northern Mockingbird 41, Brown Thrasher 13, Loggerhead Shrike 1, European Starling 7, White-eyed Vireo 9, Red-eyed Vireo 11, Northern Parula 3, Black-throated Blue Warbler 1, Pine Warbler 23, Blackpoll Warbler 11, American Redstart 9, Prothonotary Warbler 1, Ovenbird 4, Common Yellowthroat 4, Wilson's Warbler 1 (good details), Summer Tanager 17, Northern Cardinal 57, Blue Grosbeak 2, Indigo Bunting 1, Rufous-sided Towhee 29, Chipping Sparrow 2, Red-winged Blackbird 9, Eastern Meadowlark 2, Common Grackle 24, Brown-headed Cowbird 15, House Finch 29, Pine Siskin 2, American Goldfinch 7, House Sparrow 3.

Total 75 species, 798 individuals.

**Coordinator**: Robin Carter, 4165 East Buchanan Drive, Columbia, SC 29206. Participants: Molly Bonnell, Jerry Griggs, Tom Hankins, Alice Parham, Irvin Pitts, Roger Smith.

**Oconee County, SC.** 6:10 AM to 7:00 PM. Temp 56 deg. to 75 deg. F. Wind SW, 0 to 3 mph. AM cloudy; PM light rain. Regular observers: 10 in field in 4 parties. Total regular party-hours 35.75; total regular party-miles 308; 14.5 hours and 9 miles on foot; 21.25 hours and 299 miles by car. Owling observers: 2 in 1 party. Owling party-hours 1; owling party-miles 0. Totals: 36.75 party-hours; 308 party-miles, 10 participants.

Double-crested Cormorant 3, Great Blue Heron 1, Green Heron 1, Canada Goose 33, Wood Duck 4, Mallard 3, Black Vulture 12, Turkey Vulture 28, Osprey 1, Red-shouldered Hawk 4, Broad-winged Hawk 3, Red-tailed Hawk 1, American Kestrel 2, Wild Turkey 1, King Rail 1, Killdeer 8, Spotted Sandpiper 6, Rock Dove 6, Mourning Dove 86, Yellow-billed Cuckoo 7, Eastern Screech-Owl 1, Barred Owl 3, Chuck-will's-widow 1, Whip-poor-will 5, Chimney Swift 142, Ruby-throated Hummingbird 4, Belted Kingfisher 6, Red-bellied Woodpecker 15, Downy Woodpecker 11, Hairy Woodpecker 4, Northern Flicker (Yellow-shafted Flicker) 8, Pileated Woodpecker 13, Eastern Wood-Pewee 9, Acadian Flycatcher 6, Empidonax sp. 3, Eastern Phoebe 27, Great Crested Flycatcher 14, Eastern Kingbird 23, Purple Martin 4, Tree Swallow 5, Northern Rough-winged Swallow 37, Cliff Swallow 6, Barn Swallow 55, Blue Jay 20, American Crow 71, Fish Crow 3, crow sp. 2, Carolina Chickadee 41, Tufted Titmouse 37, White-breasted Nuthatch 4, Brown-headed Nuthatch 5, Carolina Wren 26, Ruby-crowned Kinglet 3, Blue-gray Gnatcatcher 43, Eastern Bluebird 50, Swainson's Thrush 2, Wood Thrush 8, American Robin 88, Gray Catbird 9, Northern Mockingbird 15, Brown Thrasher 20, Cedar Waxwing 146, European Starling 64, White-eyed Vireo 9, Yellow-throated Vireo 6, Red-eyed Vireo 68, Northern Parula 27, Yellow Warbler 5, Chestnut-sided Warbler 2, Magnolia Warbler 2, Black-throated Blue Warbler 5, Yellow-rumped Warbler ( Myrtle Warbler) 6, Black-throated Green Warbler 25, Blackburnian Warbler 2, Yellow-throated Warbler 13, Pine Warbler 17, Prairie Warbler 16, Palm

Warbler 14, Blackpoll Warbler 3, Black-and-white Warbler 8, American Redstart 11, Prothonotary Warbler 2, Worm-eating Warbler 4, Swainson's Warbler 2, Ovenbird 20, Louisiana Waterthrush 4, Kentucky Warbler 1, Common Yellowthroat 24, Hooded Warbler 23, Canada Warbler 5, Yellow-breasted Chat 24, Summer Tanager 4, Scarlet Tanager 2, Northern Cardinal 38, Rose-breasted Grosbeak 1, Blue Grosbeak 10, Indigo Bunting 105, Rufous-sided Towhee 27, Chipping Sparrow 21, Song Sparrow 5, Swamp Sparrow 2, White-throated Sparrow 1, Red-winged Blackbird 15, Eastern Meadowlark 23, Common Grackle 49, Brown-headed Cowbird 21, Orchard Oriole 4, House Finch 11, American Goldfinch 32, House Sparrow 3.

Total 110 species, 2002 individuals.

**Coordinator**: Steve Patterson, Jr., 6323 East Liberty Chapel Road, Florence, SC 29506.

Participants: Don Cox, Drew Lanham, David Mizsahi, Jill J. Patterson, Steve Patterson, Jr., Ned Shuler, Teddy Shuler, Heather Sutton, Steve Wagner, Lisa Zweede.

**Richland County, SC.** 6:00 AM to 9:30 PM. Temp 63 deg. to 84 deg. F. Wind W, 0 to 5 mph. AM partly cloudy; PM partly cloudy. Regular observers: 23 in field in 7 parties. Total regular party-hours 32.25; total regular party-miles 150.5; 28.75 hours and 10.5 miles on foot; 9.5 hours and 140 miles by car. Owling observers: 2 in 2 parties. Owling party-hours 2; owling party-miles 33.5. Feeder watchers: 1 at 1 feeding station. Feeder watcher hours 1. Totals: 35.25 party-hours; 184 party-miles, 23 participants.

Double-crested Cormorant 2, Great Blue Heron 24, Great Egret 14, Little Blue Heron 2, Cattle Egret 1, Green Heron 5, Yellow-crowned Night-Heron 3, Canada Goose 37, Wood Duck 34, Mallard 29, Black Vulture 47, Turkey Vulture 19, Mississippi Kite 2, Red-shouldered Hawk 7, Red-tailed Hawk 9, Northern Bobwhite 7, Killdeer 7, Spotted Sandpiper 1, dowitcher sp. 2 (good details), Rock Dove 132, Mourning Dove 131, Yellow-billed Cuckoo 14, Eastern Screech-Owl 2, Great Horned Owl 4, Barred Owl 5, Common Nighthawk 4, Chuck-will's-widow 11, Whip-poor-will 11, Chimney Swift 132, Ruby-throated Hummingbird 8, Belted Kingfisher 2, Red-headed Woodpecker 6, Red-bellied Woodpecker 44, Downy Woodpecker 12, Hairy Woodpecker 2, Red-cockaded Woodpecker 2, Northern Flicker (Yellow-shafted Flicker) 10, Pileated Woodpecker 11, Eastern Wood-Pewee 12, Acadian Flycatcher 31, Eastern Phoebe 5, Great Crested Flycatcher 46, Eastern Kingbird 9, Horned Lark 9, Purple Martin 28, Northern Rough-winged Swallow 3, Barn Swallow 25, Blue Jay 44, American Crow 34, Fish Crow 18, crow sp. 10, Carolina Chickadee 40, Tufted Titmouse 67, White-breasted Nuthatch 1, Brown-headed Nuthatch 29, Carolina Wren 71, Blue-gray Gnatcatcher 38, Eastern Bluebird 15, Swainson's Thrush 2, Wood Thrush 5, American Robin 79, Gray Catbird 4, Northern Mockingbird 65, Brown Thrasher 27, Loggerhead Shrike 3, European Starling 60, White-eyed Vireo 41, Solitary Vireo 1, Yellow-throated Vireo 11, Red-eyed Vireo 30, Northern Parula 57, Black-throated Blue Warbler 1, Yellow-throated Warbler 11, Pine Warbler 76, Prairie Warbler 10, Blackpoll Warbler 2, Black-and-white Warbler 1, American Redstart 11, Prothonotary Warbler 14, Swainson's Warbler 1, Ovenbird 3, Northern Waterthrush 1, Louisiana Waterthrush 5, Kentucky Warbler 9, Common Yellowthroat 18,

Hooded Warbler 12, Canada Warbler 1, Yellow-breasted Chat 23, Summer Tanager 35, Scarlet Tanager 1, Northern Cardinal 171, Rose-breasted Grosbeak 2, Blue Grosbeak 11, Indigo Bunting 48, Rufous-sided Towhee 54, Bachman's Sparrow 1, Chipping Sparrow 10, Field Sparrow 2, Bobolink 2, Red-winged Blackbird 20, Eastern Meadowlark 12, Common Grackle 120, Brown-headed Cowbird 20, Orchard Oriole 8, House Finch 86, American Goldfinch 4, House Sparrow 7.

Total: 106 species, 2528 individuals.

**Coordinator**: Robin Carter, 4165 East Buchanan Drive, Columbia, SC 29206. Participants: Molly Bonnell, Eula Lauren Bowman, Bridget Calvey, Robin Carter, Angela Corley, Rod Corley, Steve Dennis, Caroline Eastman, Jerry Griggs, Kim Gundler, Carol Kososki, John Kososki, Alice Parham, Damien Price, David Price, Lyn Price, Bethany Ray, Jonathan Ray, Ken Scott, Glen Smith, Tammy Sutherland, Cindy Tufford, Dan Tufford.

**Spartanburg County, SC.** 6:00 AM to 8:00 PM. Temp 56 deg. to 75 deg. F. Wind N to SW, 3 to 6 mph. AM cloudy; PM partly cloudy. Regular observers: 19 in field in 9 parties. Total regular party-hours 56; total regular party-miles 333; 34.75 hours and 30 miles on foot; 19.75 hours and 301 miles by car; 1.5 hours and 2 miles by canoe. Owling observers: 1 in 1 party. Owling party-hours 1; owling party-miles 1. Feeder watchers: 5 at 5 feeding stations. Feeder watcher hours 12. Totals: 69 party-hours; 334 party-miles, 19 participants.

Double-crested Cormorant 1, Great Blue Heron 2, Green Heron 4, Canada Goose 56, Wood Duck 2, Mallard 83, Black Vulture 1, Turkey Vulture 10, Cooper's Hawk 1, Red-shouldered Hawk 4, Red-tailed Hawk 11, Northern Bobwhite 12, Killdeer 12, Solitary Sandpiper 3, Spotted Sandpiper 5, American Woodcock 2, Rock Dove 20, Mourning Dove 107, Yellow-billed Cuckoo 7, Eastern Screech-Owl 6, Barred Owl 1, Common Nighthawk 1, Chuck-will's-widow 3, Whip-poor-will 5, Chimney Swift 109, Ruby-throated Hummingbird 1, Belted Kingfisher 4, Red-headed Woodpecker 1, Red-bellied Woodpecker 24, Downy Woodpecker 15, Hairy Woodpecker 1, Northern Flicker (Yellow-shafted Flicker) 14, Pileated Woodpecker 3, Eastern Wood-Pewee 2, Acadian Flycatcher 6, Willow Flycatcher 3, Eastern Phoebe 13, Great Crested Flycatcher 12, Eastern Kingbird 22, Horned Lark 4, Purple Martin 12, Northern Rough-winged Swallow 10, Barn Swallow 28, Blue Jay 113, American Crow 102, Fish Crow 8, Carolina Chickadee 55, Tufted Titmouse 51, White-breasted Nuthatch 1, Brown-headed Nuthatch 3, Carolina Wren 32, Blue-gray Gnatcatcher 22, Eastern Bluebird 95, Wood Thrush 5, American Robin 237, Gray Catbird 6, Northern Mockingbird 117, Brown Thrasher 49, Cedar Waxwing 2, European Starling 213, White-eyed Vireo 4, Red-eyed Vireo 32, Northern Parula 2, Yellow Warbler 2, Magnolia Warbler 1, Yellow-throated Warbler 4, Pine Warbler 11, Prairie Warbler 3, Blackpoll Warbler 2, Black-and-white Warbler 1, American Redstart 6, Louisiana Waterthrush 5, Common Yellowthroat 5, Canada Warbler 1, Yellow-breasted Chat 14, Summer Tanager 10, Scarlet Tanager 2, Northern Cardinal 100, Rose-breasted Grosbeak 2, Blue Grosbeak 6, Indigo Bunting 35, Rufous-sided Towhee 44, Chipping Sparrow 24, Field Sparrow 37, Grasshopper Sparrow 10, Song Sparrow 10, Bobolink 1, Red-winged Blackbird 39, Eastern Meadowlark 40, Brewer's Blackbird 2 (good details), Common Grackle 267, Brown-headed

Cowbird 10, Orchard Oriole 5, Northern Oriole (Baltimore Oriole) 1, House Finch 58, American Goldfinch 24, House Sparrow 4.

Total 97 species, 2578 individuals.

**Coordinator**: Lyle Campbell, 126 Greengate Lane, Spartanburg, SC 29307. Participants: Lyle Campbell, Sarah Campbell, Jo Ann Casserly, Marion Clark, Onoosh Gahagan, Ron Gahagan, John Green, Gill Hooper, Virginia Hooper, Joel Jones, Marian Murph, Gibbes Patton, Alan Rose, Max Shealy, Oakley Smith, Cathy Terrell, Simon Thompson, Chris Thornberg, Dick Thorpe, Lois Thorpe, Geral Thurmond, Hillary Vinson, Zora Weisbecker.

# General Field Notes


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## NOTICE

Publication of any unusual sightings of birds in the Field Notes or Briefs for the Files does not imply that these reports have been accepted into the official Checklist of Birds records for either North or South Carolina. Decisions regarding the official Checklists are made by the respective State Records Committees and will be reported upon periodically in THE CHAT.

### First Record of a California Gull for North Carolina


Stephen J. Dinsmore
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Raleigh, NC 27607

John O. Fussell
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Morehead City, NC 28557

Jeremy Nance
3259 N 1st Avenue
Tucson, AZ 85719


At approximately 1400 h on 29 January 1993, we observed an adult California Gull (*Larus californicus*) at the Carteret County landfill, located southwest of Newport, North Carolina. We were birding the northwest corner of the landfill when Fussell called our attention to a slightly darker-mantled gull resting with hundreds of other gulls, mostly Herring Gulls (*L. argentatus*). We immediately recognized the bird as an adult California Gull. We were able to observe and photograph the bird for the nest half hour at distances of 75–100 m. At 1430 the bird suddenly flew south over the dump and we were not able to relocated it over the next 2 hours.

The following is a detailed description of the bird, much of it written immediately after the sighting. The bird was slightly smaller and slimmer than the numerous Herring Gulls surrounding it. The bill was similar in shape to the bill of a Herring Gull, though the gonys was less pronounced and the bill was thinner. There were obvious red and black subterminal spots, with the red spot slightly above and posterior to the black spot. The head was mostly white, with a hint of brown streaking, particularly on the nape where it formed a partial collar. The eye was dark brown. The underparts and tail were white. The mantle and upperwing were dark gray, a shade darker than those of a Herring or Ring-billed Gull (*L. delawarensis*), but noticeably paler than a nearby Lesser Black-backed Gull (*L. fuscus*). The upperwing was the same color as the mantle. The wing tip pattern was not studied closely because the bird flew unexpectedly. However, we did note that the bird seemed to have less white in the primary tips than a Herring Gull. Also, the black color in the primaries seemed more extensive than that of a Herring Gull. We did not determine the exact locations of the white mirrors in the primaries. In flight, there was a narrow white trailing edge to the flight feathers. The legs were dull yellow-green and not nearly as bright as the legs of adjacent adult Ring-billed Gulls. Leg length was proportionately shorter than that of a Herring Gull. Based on the bill pattern, wing pattern, and unmarked tail, we aged the bird as an adult California Gull in basic plumage (see Grant 1986).

Confusion with other larids and the possibility of a hybrid were considered. California Gull is most easily confused with Herring, Thayer's (*L. thayeri*), and Lesser Black-backed gulls due to the similarity in size and mantle color. However, Herring Gull has pink or flesh-colored legs, a pale eye, and slightly paler gray mantle, and is noticeably larger than a California Gull. Lesser Black-backed Gull also lacks the dark mark on the bill, has a pale eye, and has a slightly darker gray mantle.

The California Gull was seen again on 30 January by several birders, but could not be found on later dates. This represents the first record of a California Gull for North Carolina. Dinsmore observed an adult California Gull at Hatteras Inlet on 22 March 1992, though the report has yet to be reviewed by the North Carolina Records Committee. This species is a frequent vagrant to the Atlantic seaboard with at least 45 records cited in American Birds since 1980. Birds have appeared in nearly every month, though there is a distinct peak in December-February. Most records are of adult birds. Based on the general increase in records of western larids in the Eastern United States, future records of California Gull for North Carolina can be expected.

## LITERATURE CITED

Grant, P. J. 1986. Gulls: A guide to identification. Buteo Books, Vermillion, SD. 352 pp.

## First Gyrfalcon Report for North Carolina

Bob Holmes
4003 Trent Pines Drive
New Bern, NC 28562

Wade Fuller
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New Bern, NC 28560

On 10 February 1992 we observed a gray morph Gyrfalcon (*Falco rusticolus*) at the "New Ditch Farm", approximately 3 miles N of Bayboro, Pamlico County, North Carolina. This farm consists of a huge field of some 5,000+ acres, interrupted by small patches of woods and a grid of ditches and one-lane farm roads. The sighting was around 0900 h. The day was overcast with a steady 10–15 mph north wind.

The Gyrfalcon, most likely a female (based on its size), was first seen from our vehicle at a distance of 75–80 yards. It was perched on a small hump of dirt in the bare, plowed field and had a distinctive "hunched" appearance. When we exited our vehicle to view the bird through binoculars, it promptly took flight, moving directly away from us, and landed again on the ground in front of a 3-foot high dirt ditch bank that transected the field some 500 yards away. The senior author had 9 x 35 binoculars and the junior author had 10 x 40 binoculars. A large tract of woods was less than 75 yards from the bird's new location. The bird's selection of a perch on the ground rather than in the nearby woods is behavior typical of the tundra-based raptors such as Gyrfalcon, Snowy Owl (*Nyctea scandiaca*), and tundra Peregrine Falcon (*Falco peregrinus tundrius*).

After driving closer to the bird's new location, it took flight again and we picked it up in our glasses after it had crossed the dirt ditch bank and was in process of crossing an adjoining field. It moved directly away from us, then flew to our left which allowed for a view from a different angle, before turning 90° and finally flying out of sight. Our viewing time totaled about three minutes. Efforts to relocate it were unsuccessful.

The bird's long, pointed wings, its tail that was relatively wider than but not as long as that of an *Accipiter* and the nature of its flight clearly marked it as a falcon. The wing beats were continuous (no alternate flapping and gliding), rapid and shallow, with most of the movement in the wings confined to the wrists. The wing beats were below the horizontal of the shoulders; that is, the wrists and the tips of the primaries never rose quite to a point horizontal to the shoulder. This manner of wing movement was noticeably different from the flowing motion typical of Peregrine Falcons where the wing movement originates at the shoulder and the wings rise well above a position horizontal to the shoulder. When this bird flew to our left and then turned to our right, we were able to appreciate the width of its wings. Even though its wings were long, the appeared noticeably wider than those of a Peregrine Falcon. In spite of this rather broad wing, this individual still had the "pointy" look of a falcon. Becoming airborne required a few deep, heavy wing beats; but once in flight, its speed was impressive. This bird covered a considerable distance in a very short order. Its line of flight was direct and it never exceeded 15–20 feet in altitude.

The Gyrfalcon's length and wingspread were noticeably greater than that of a Peregrine Falcon's. A more impressive difference was its greater bulk. The

The Gyrfalcon's length and wingspread were noticeably greater than that of a Peregrine Falcon's. A more impressive difference was its greater bulk. The torso appeared to be as large or larger than that of a Red-tailed Hawk (*Buteo jamaicensis*). (Prior to our encounter with the Gyrfalcon, we had seen three Red-tailed Hawks - two in flight and one perched in a tree at about the same distance from us as the Gyrfalcon first was. The falcon's medium-gray color was lighter than the slate gray of typical adult male Peregrines, but darker than typical adult male Northern Harriers (*Circus cyaneus*). The underparts were somewhat lighter than the upperparts, but without the dark/light contrast that most Peregrines show. The bird's darkest plumage was on the crown and produced some contrast, though without clear demarcation, to the lighter face so that there was not a helmet-like appearance. Neither was there a distinct mustache. Our only close-up view of this bird perched was for a brief instant just as it started to take flight. Unfortunately, other than discerning that the bill was that of a raptor, we did not note eye color or bill color due to the lighting and brief view of the face. As the Gyrfalcon took flight moving away from us, we were able to discern that the tail was relatively wide and tapered slightly toward the somewhat squared-off, not rounded, tip. The tail was slightly lighter gray than the back and showed no distinct barring or terminal band. Within 5 minutes of losing sight of the Gyrfalcon, we encountered a Northern Harrier in flight at about the same distance as when the falcon first took flight. We both had the immediate impression of the Gyrfalcon being almost $1^1/_2$ times the size of the Harrier.

We felt that the above observations of shape, size, flight characteristics, color patterns, and proclivity to perch on the ground convincingly identified this bird as a Gyrfalcon and distinguished it from Northern Goshawk (*Accipiter gentilis*) and Peregrine Falcon, the two species with which it is most likely to be confused.

A question which could be posed is whether this individual might have been an escapee from a falconer. With this in mind, the senior author wrote letters to a number of falconry clubs and to the U. S. Fish and Wildlife Service, asking if there was knowledge of a lost Gyrfalcon. Feedback from this effort was scant, but we were assured that no one in North Carolina owned such a bird and further, that the value of a Gyrfalcon is such that it would surely have a radio transmitter attached to it. We saw no evidence of electronic devices or jesses attached to it. Its wariness did not suggest a bird accustomed to captivity. Parenthetically, one might add that Goshawks are usually fairly approachable birds.

Not until some time after we identified the Gyrfalcon did we learn that the fall and winter of 1991–92 proved to be a "Gyrfalcon year", with the movement into New England being described as "the biggest invasion in years" (American Birds 46:225). Individuals were seen as far south as Hackensack, N. J. (Am. Birds 46:241) and Kansas (Am. Birds 46:115).

We believe this to be the first report of a Gyrfalcon having been seen in North Carolina. Details of the observation were submitted earlier to the Bird Records Committee of the Carolina Bird Club which gave a unanimous vote to accept the sighting and subsequently added this species to the state's Provisional List as no photographs were taken (Chat 58:85).

## BRIEFS FOR THE FILES

RICKY DAVIS

(All dates Spring-Summer 1994)

PACIFIC/ARCTIC LOON: After the rash of sightings this past winter, there were still some found during March in North Carolina. At Figure Eight I. one was found on the 5th and two were seen on the 26th (Derb Carter). At Cape Lookout, Paul Spitzer observed one between the 18th and the 28th (fide John Fussell).

PIED-BILLED GREBE: Nesting records in the Carolinas are always noteworthy, thus of interest was the report of six pairs with young photographed near Snead's Ferry, NC during the summer (Nell Moore).

WESTERN GREBE: The Outer Banks of North Carolina continued to host this rare species with two individuals being found near Avon March 5 (Steve Dinsmore, Susan Barrell). Observers should be cautious when reporting this species and be sure to rule out the Clark's Grebe which could turn up in our area.

RED-NECKED GREBE: This species staged a major movement into North Carolina during February and reports continued on into May. Grebes were found all along the Outer Banks with the highest one day total of 138 from C. Hatteras to Rodanthe on March 5 (Steve Dinsmore, Susan Barrell) being a record count. There were some inland too with from two to four at Jordan Res. during March (Ricky Davis, Chapel Hill Bird Club), six near Greensboro March 3 (Herb Hendrickson, Ramona Snavely, and others), and five at Kerr Scott Res. March 22 (Adam and Phyllis Martin). Some of the later records included singles at Figure Eight I. April 1 (Steve Dinsmore), Wrightsville Beach April 2 (Sam Cooper), and inland at L. Brandt May 4-7 (Herb Hendrickson, Henry Link).

EARED GREBE: One in breeding plumage was found at C. Hatteras March 31 by Suzanne Wrenn.

HERALD PETREL: A good count of three (2 dark and 1 light phase) were off Hatteras May 29 (Brian Patteson, et al.) and a dark phase individual was also off Hatteras July 29 (Patteson, et al.). This species is being reported regularly during the spring to fall period and is now expected each year.

CAPE VERDE PETREL: This rare petrel was found off Oregon Inlet May 30 when from one to two birds were seen (Mike Tove, et al.). Although much rarer than the Herald Petrel, this species has been seen several times the last couple of years and should be looked for.

AUDUBON'S SHEARWATER: What might be a record count for North Carolina was the 607 off Hatteras July 30 (Brian Patteson, et al.). Also one was seen flying in the surf at Long Beach, NC July 31 (Ricky Davis) for an unusual report.

MANX SHEARWATER: The only report came from shore when one was observed at C. Hatteras May 31 (Ned Brinkley).

WHITE-FACED STORM-PETREL: One of these rare birds was found off Hatteras July 30 (Brian Patteson, et al.) for the only report.

WILSON'S STORM-PETREL: A very good count from shore was the 149 counted at C. Hatteras May 31 by Ned Brinkley.

LEACH'S STORM-PETREL: Spring birds included seven off Hatteras May 14 (Brian Patteson, et al.), 13 off Oregon Inlet June 3 (Armas Hill, et al.), and 18 off Hatteras June 5 (A. Hill, et al.). Also one was seen from shore at C. Hatteras June 4 (Ned Brinkley).

BAND-RUMPED STORM-PETREL: Small numbers were present off North Carolina's Outer Banks from late May until August with the best count being a respectable 36 off Hatteras July 31 (Brian Patteson, et al.).

WHITE-TAILED TROPICBIRD: This species was present offshore in good numbers with an adult off Hatteras June 5 (Armas Hill, et al.). four adults off Oregon Inlet June 18 (Brian Patteson, et al.), and from one to two adults and one immature off Hatteras July 29-31 (Brian Patteson, et al.).

RED-BILLED TROPICBIRD: This very rare species was found off Hatteras July 24 (Brian Patteson, et al.). The bird was an immature but was video taped and seen well. It had been almost eleven years since the last report of this species in the Carolinas.

MASKED BOOBY: One off of Hatteras July 31 (Brian Patteson, et al.) was a good find and was the first report of the season.

MAGNIFICENT FRIGATEBIRD: The only report this season was of a female plumaged individual seen flying high over Frisco, NC June 20 (fide Marcia Lyons).

BROWN PELICAN: An adult was found on Price Lake along the Blue Ridge Parkway south of Boone, NC on May 20 (Adam Martin and others). This lost bird provided the farthest inland record for the Carolinas and had to be a big surprise for those who found it!

WHITE PELICAN: Always noteworthy in our area, two were seen at Ft. Fisher, NC March 19 (Ralph Widrig).

GREAT CORMORANT: A very rare inland record was provided by an immature flying over L. Townsend near Greensboro, NC May 7 (Herb Hendrickson, Peggy Ferebee). Also a summer record was furnished by one at Pea I., NC July 22 (Ned Brinkley).

ANHINGA: The farthest inland reports included singles at Jordan Res. April 20 (Doug Shadwick) and in Cumberland County March 19 (Phil Crutchfield).

AMERICAN BITTERN: One spent the summer in the Croatan Forest area (Nell Moore), but no evidence of breeding was found. This species needs monitoring and any records of breeding season birds in the Carolinas are highly important.

BLACK-CROWNED NIGHT-HERON: A rare mountain record was of one in Transylvania County April 16 as noted by John and Becky Huggins and Jack Hudson.

YELLOW-CROWNED NIGHT-HERON: In North Carolina, nesting birds were found near Winston-Salem (Charles Frost, Hop Hopkins, Ramona Snavely) and Greensboro (Herb Hendrickson). Also two adults were found near Jamesville along the Roanoke River indicating nesting (Merrill Lynch) where there is only one previous breeding record from 1991 (Mike Canada, fide M. Lynch).

GREAT "WHITE" HERON: An individual of this form of the Great Blue Heron showed up at Pea I., NC in late July and remained on into the fall season.

One of only a handfull of records in our area, it gave many observers great views as it was quite approachable.

GREAT EGRET: An individual found at L. Brandt near Greensboro, NC on May 30 (Henry and Elizabeth Link) was considered to be quite late for an inland spring report. This spring the largest known inland heronry in North Carolina was found in Bertie County (USF&W, Merrill Lynch) with 800+ nests of this Egret and Great Blue Herons!

SNOWY EGRET: A very rare spring record was of one inland along the Deep River, Chatham County, NC in May as noted by Harry LeGrand.

CATTLE EGRET: An uncommon occurrence for the mountains was the presence of two in Transylvania County in April (Jack Hudson, Virginia Heckman, fide Norma Siebenheller).

REDDISH EGRET: Reports of this now annual visitor included an immature at Huntington Beach State Park, SC in June (Jack Peachey), a rare white phase adult near Harker's I., NC July 2 (Steve Dinsmore), an adult dark phase at Hatteras, NC July 3 (Ned Brinkley), a dark immature at Sunset Beach, NC from mid-July on into fall (Russ Tyndall, Patricia Earnhardt, m. ob.), and another dark immature at Bodie Island pond during August (m. ob.).

WHITE IBIS: Inland wanderers included an individual near Wilson's Mills, Johnston County, NC July 19 (Scott Hartley) and six near Greenville, NC June 25 (Russ Tyndall, Patricia Earnhardt).

GLOSSY IBIS: The only inland report was of two at Roanoke Rapids Lake, NC April 29 as noted by Frank Enders.

WOOD STORK: The usual summering spot near Sunset Beach, NC hosted 15 birds as early as July 16 (Russ Tyndall). Much rarer and out of range was the presence of two immatures in the mountains at the Pisgah Nat. Forest Fish Hatchery during the last two weeks of July (m. ob., fide Norma Siebenheller).

MUTE SWAN: After this past winter's flurry of sightings, one was found in spring at L. Mattamuskeet, NC May 25 (Frank Enders).

SNOW GOOSE: A rare spring occurrence was the six white phase Snows seen migrating over Myrtle Beach, SC on April 23 by Jeff Hole.

BRANT: Another locally rare sighting was the Brant found near Carolina Beach, NC on March 19 as noted by Jim Parnell.

BLACK DUCK: A good nesting population was found near Sneads Ferry, NC this summer when 40 birds were present and young were noted on June 20 (Nell Moore).

LESSER SCAUP: A late or summering bird was noted near Sneads Ferry, NC on June 20 (Nell Moore).

RING-NECKED DUCK: Another summering duck was the Ring-necked found near Greenville, NC June 25 by Russ Tyndall.

SURF SCOTER: A male at the Fort Macon jetty near Atlantic Beach, NC June 5 was quite late (Scott Hartley, Randy Newman).

COMMON EIDER: Five birds (3 females and 2 immature males) were seen at the Oregon Inlet jetty during March by many observers, providing the only report for the spring season.

HARLEQUIN DUCK: A very rare local record was the presence of two females in the Holden Beach - Ocean Isle area during April (Rick Murray, Mary McDavit).

HOODED MERGANSER: Breeding was noted in both states this spring with one pair at the Silver Bluff Sanctuary, Jackson, SC (Anne and Vernon Waters) and four different nesting records along the Roanoke River in northeastern NC (Merrill Lynch, Jerry Holloman).

RED-BREASTED MERGANSER: Spring migrants were noted inland at Beaverdam Res. near Raleigh when 11 were noted March 6 (Ricky Davis), and at L. Higgins near Greensboro, when 11 were found May 7 (Henry Link).

COMMON MERGANSER: This species was found twice this spring when an immature male was found near Greenville, NC May 1 (John and Paula Wright) and a female was seen at C. Hatteras March 27 (Steve Dinsmore, Susan Barrell).

RUDDY DUCK: For the second year in a row, birds summered at a site near Sneads Ferry, NC (Nell Moore). Three pairs were present, but no young were observed this summer.

TURKEY VULTURE: This species is normally rare on the Outer Banks, but this spring a handfull of sightings were made. Two were at Portsmouth March 17 (Steve Dinsmore), one was at Salvo April 10 (Russ Tyndall, Patricia Earnhardt), five were in the Buxton - Avon area April 22 (Marcia Lyons), and one was at C. Hatteras May 14 (Eric Fulcher).

SWALLOW-TAILED KITE: South Carolina reports included singles at the Bucksport Sod Farm, Horry Co. April 16 (Caroline Eastman) and at the Congaree Swamp Nat. Mon. April 30 (George McCoy, et al., fide Robin Carter). In North Carolina, birds were found near Hatteras Inlet April 27 (Marcia Lyons) and near Exum in the Green Swamp on May 5 (Rick Murray).

MISSISSIPPI KITE: Reports from South Carolina included one at Sesquicentennial State Park, Richland Co. on May 6 (Robin Carter), at least five reports from the Savannah River Site during July (Barny Dunning); and more importantly a nest was located near downtown Camden this summer (Jim Wood, fide John Cely) for a rare find. In North Carolina, a rare mountain record was provided by one found over Pinnacle Mntn. Ridge, Henderson Co. on May 11 by Betty McIlwain, Jack Hudson, and Dorothy Hollis. Locally rare occurrences were one at Roan I., C. Fear R., Pender Co. on June 17 (Sam Cooper) and one at L. Phelps, Washington Co. on May 29 (Merrill Lynch) which provided a first county record. A good count of 36 over one field near the Scotland Neck stronghold on May 27 (Frank Enders) must have been impressive. Finally, the presence of three adults at Jamesville, Martin Co. on May 24 (Merrill Lynch) was an extension downstream along the Roanoke River of this species' known range.

BALD EAGLE: This species continues to increase across the Carolinas and some of the more noteworthy reports included an adult in the mountains near Brevard May 29 & 30 (fide Betty McIlwain), an immature on the Outer Banks during May and early June (m. ob.), and the successful

fledging of young from a Piedmont nest near Greensboro as reported by Herb Hendrickson.

NORTHERN HARRIER: A nest with eggs was found at Cedar I. in May (Steve Williams, fide Steve Dinsmore). This is the second year in a row that nesting of this species has been documented in the state.

SHARP-SHINNED HAWK: There were three different reports of this species in the Winston-Salem, NC area from June 15 to July 5 (Lloyd Ramsey, fide Ramona Snavely) which may or may not have involved the same individual.

COOPER'S HAWK: Summer reports are always interesting and this season there were many from North Carolina. Single adults were found near Rowland, Robeson Co. May 30 (Harry LeGrand), in Gaston Co. June 8 (Simon Thompson), near Apex, Wake Co. June 10 (Merrill Lynch), Chapel Hill June 12 (Lynch), near Columbus June 15 (Thompson), and near Ringwood, Halifax Co. June 25 (Lynch). Documentation of nesting occurred twice with young in a nest in the Green Swamp in southeastern NC during May (Rick Murray) and a pair with a fledgling in Transylvania Co. July 10 (Norma Siebenheller).

BROAD-WINGED HAWK: Reports east of the usual range in North Carolina involved a late migrant at C. Lookout May 28 (Harry LeGrand, et al.), one north of Havelock June 3 (John Fussell), and a pair at Goose Creek State Park June 13 (Scott Hartley).

GOLDEN EAGLE: This species was found in the mountains more frequently than in past years. There was an immature at Whiteside Mntn. March 4 (Dick Blee, fide Norma Siebenheller), an adult near Tryon March 10 (Simon Thompson), a sub-adult at Shining Rock Wilderness area May 20 (Mark Simpson, Russ Tyndall, Patricia Earnhardt), and a pair of adults were seen in the Mt. Mitchell area June 17 (Derb Carter) for a most intriguing report!

AMERICAN KESTREL: Nesting reports included a male defending a nest site near Roanoke Rapids L., NC April 22 (Frank Enders) and a pair nested at the Savannah River Site, Jackson Co., SC in May (Anne and Vernon Waters). Other breeding season sightings were a pair near Goldsboro during July (Gene Howe) and a bird near Clayton, Johnston Co. July 19 (Scott Hartley). Nesting was observed at the Goldsboro site last year.

MERLIN: Locally rare were the inland occurrences at Landrum, SC March 28 (Simon Thompson), downtown Greensboro, NC April 9 (Henry and Elizabeth Link), and Scotland Neck, NC April 26 (Frank Enders).

YELLOW RAIL: Seeing this species is always a blessed event! Thus of interest was one flushed at Cedar I., NC in early May by Steve Williams, fide Steve Dinsmore.

BLACK RAIL: One was seen well at the Leechville marsh spot, Beaufort Co., April 30 by John and Paula Wright and a group of CBC field trip participants. Also a new breeding season location was found in mainland Dare Co. when John Fussell heard one along Deep Creek on July 20.

PURPLE GALLINULE: A locally rare occurrence was the two nesting pairs found at Bull's I., SC during the summer (Peter Range, Lex Glover).

AMERICAN GOLDEN PLOVER: This species is very rare in the Carolinas in spring, thus noteworthy were the two at Ecusta, Transylvania Co. April 9-

12 (Betty McIlwain, Norma Siebenheller) and one at Landrum, SC March 28-29 (Simon Thompson).

BLACK-BELLIED PLOVER: An early fall migrant was at the Orangeburg Sod Farm July 30 as noted by Robin Carter and Caroline Eastman.

WILSON'S PLOVER: An early spring arrival was found at Ocracoke, NC March 5 (Steve Dinsmore, Susan Barrell).

SEMI-PALMATED PLOVER: The only spring inland report was of two at Goldsboro, NC April 30 (Eric Dean).

PIPING PLOVER: A good count of 49 at Portsmouth, NC was had on March 18 by Steve Dinsmore and Susan Barrell.

BLACK-NECKED STILT: One found at the New Bern, NC quarry May 29 (Bob Holmes) was probably a first record for Craven County.

SOLITARY SANDPIPER: One in Plantersville, Georgetown Co., SC on March 19 was quite early for a spring transient (Jack Peachey, et al.).

UPLAND SANDPIPER: Spring migrants were found from March 30 (5 at Goldsboro, NC, Eric Dean) to May 7 (1 in Durham Co., NC, Harry LeGrand). The peak count was 20 at the Orangeburg Sod Farm, SC on April 9 as noted by Steve and Jill Patterson. Fall migrants were noted at the Orangeburg Sod Farm with nine on July 24 and a peak of 35 on July 31 (Robin Carter, Caroline Eastman).

BLACK-TAILED GODWIT: North Carolina's second documented record was provided by an individual at North Pond, Pea I. which was present during the last week of July. The first record was a bird found at Bodie I. Pond just across Oregon Inlet in December 1979!

LONG-BILLED CURLEW: The Ft. Fisher, NC bird was last seen March 9 (John Fussell) and the Portsmouth area as usual had one on March 17 as noted by Steve Dinsmore. One at nearby Ocracoke May 2 (Suzanne Wrenn) was somewhat late for our area.

SANDERLING: One was found at the Orangeburg Sod Farm on July 28 as noted by Pete Worthington.

WESTERN SANDPIPER: Locally uncommon spring records involved singles at Raleigh, NC May 9 and Scotland Neck, NC May 22 (Ricky Davis).

LEAST SANDPIPER: Fifty at the Orangeburg Sod Farm on July 31 was a good count for that area (Robin Carter, Caroline Eastman).

WHITE-RUMPED SANDPIPER: North Carolina had several inland records this spring with one at Raleigh May 7 (Robert Hader), one at Goldsboro May 12 (Eric Dean), another one at Goldsboro May 21 (Gene Howe, Langhorne Bell), two at L. Adger, Polk Co. May 26 (Simon Thompson), and one at Winston-Salem May 27 (Lloyd Ramsey, et al., fide Ramona Snavely).

PECTORAL SANDPIPER: A very good count of 150 was at the Orangeburg Sod Farm on July 31 (Robin Carter, Caroline Eastman).

DUNLIN: Inland migrants were noted at Raleigh May 6&7 (Robert Hader) and Goldsboro when two were found on May 12 (Eric Dean).

CURLEW SANDPIPER: The only spring report was of one at South Pond, Pea I. May 10 (Steve Dinsmore, Susan Barrell). The first record of the summer migration period was of one in partial breeding plumage at South Pond on July 31 (Harry LeGrand, Derb Carter, Merrill Lynch).

STILT SANDPIPER: One was found at the Orangeburg Sod Farm on July 24 by Robin Carter and Caroline Eastman for a good local record.

SHORT-BILLED DOWITCHER: A rare local record was provided by one at Rocky Mount, NC May 16 (Ricky Davis).

LONG-BILLED DOWITCHER: One at the Orangeburg Sod Farm July 28-31 (Pete Worthington, Robin Carter, Caroline Eastman, Roger McNeill) provided a very rare local record.

WILSON'S PHALAROPE: Rare spring records were had when singles were found at Pea I. and C. Hatteras on May 10 (Steve Dinsmore, Susan Barrell). The only summer report involved one at North Pond, Pea I. July 27-31 (Russ Tyndall, Harry LeGrand, Derb Carter, Merrill Lynch).

RED-NECKED PHALAROPE: Always rare on land, a male was at Bodie I. Pond June 2 as noted by Ned Brinkley.

RED PHALAROPE: The 23 seen off Hatteras May 14 (Brian Patteson, et al.) was a good total for that late in the spring.

POMARINE JAEGER: Two off Hatteras June 5 (Armas Hill, et al.) included an "all-dark" phase individual which is rarely reported in our area.

LONG-TAILED JAEGER: Spring migrants included singles off Hatteras May 14 & 28 (Brian Patteson, et al.) and off Oregon Inlet May 30 (Mike Tove, et al.). Fall migrants were one immature July 24 and three immatures July 31, all off Hatteras (Brian Patteson, et al.).

SOUTH POLAR SKUA: Very rare from land was the one seen from C. Hatteras June 4 by Ned Brinkley and Nerses Kazanjian. Also one was found off Oregon Inlet June 18 (Brian Patteson, et al.).

LAUGHING GULL: Inland migrants were the four at L. Crabtree near Raleigh April 13 (Doug Shadwick) and one in Transylvania Co. April 13 (Norma Siebenheller) which furnished a first county record.

LITTLE GULL: In North Carolina this species continued on into spring after the February invasion. Three adults off C. Hatteras March 5 (Steve Dinsmore, Susan Barrell), one at Pea Island, March 5 (Herb Hendrickson, Henry Link), and one at C. Lookout March 18 (Dinsmore) were almost expected. Much less expected was the adult at Wrightsville Beach April 2 (Sam Cooper) which is very rare in the southeastern coastal area. An immature was found at Jordan L. March 6 (Ricky Davis) and was relocated later there on March 26 (Jeff and Anne Pippen). This was the first definite inland record of Little Gull in the state.

BONAPARTE'S GULL: Huge numbers were found at C. Hatteras March 5 when 20,000+ were seen by Steve Dinsmore. Also unprecedented numbers were found far inland in the mountains with 300+ in a field in Transylvania Co. March 30 (Tom Joyce, fide Norma Siebenheller). Also counts of 38+ in Tryon March 27 (Simon Thompson) and 20+ in the Greensboro area from late March to mid-April (Herb Hendrickson) were higher than normal.

ICELAND GULL: Probably a holdover from the winter was a second winter plumaged bird at C. Hatteras March 19 (C. Hatt. Bird Club). Much rarer and very late was the second winter bird found at Sunset Beach, NC May 14 & 15 (Diane Hahn, Sue Baer, Richard Brown).

LESSER BLACK-BACKED GULL: A very good total of 20 was found in the C. Hatteras area on March 5 by Steve Dinsmore and Susan Barrell. Slightly late were the three still at the Horry Co., SC landfill on April 16 (Robin Carter, Caroline Eastman).

GLAUCOUS GULL: The only spring report was of a first winter bird at Ocracoke on March 5 (Steve Dinsmore, Susan Barrell).

GREATER BLACK-BACKED GULL: After this winter's inland sightings, one was still present at Jordan Res. on April 24 when a third-year bird was noted by Ricky Davis.

ROSEATE TERN: Spring sightings included four at C. Hatteras May 10 (Steve Dinsmore, Susan Barrell), one there May 14 (Diane Andre, Pat Moore), and two at C. Lookout May 24 (John Fussell).

COMMON TERN: The only inland report was of one at Roanoke Rapids L. April 22 (Frank Enders).

ARCTIC TERN: Spring migrants included four off Hatteras May 14 (Brian Patteson, et al.) and a good count of 11 off Oregon Inlet May 30 (Mike Tove, et al.).

BRIDLED TERN: The total of 12 off Hatteras May 14 (Brian Patteson, et al.) was quite good for that early in the season.

SOOTY TERN: This species was once again present at C. Hatteras this year from early May to late July. The peak count was six on May 17 (Jan Hansen) and two nests were found in late May (m. ob..).

BLACK TERN: One at Goldsboro, NC May 17 (Eric Dean) was locally rare in spring. This species starts its southbound migration in July and this year there were more inland records than in the past several years. One was at New Bern July 3 (Bob Holmes), Goldsboro July 9 (Gene Howe), Falls L. July 22 (Ricky Davis), 14 at the Bethel Lagoons July 23 (Davis), and another one at Rocky Mount July 23 (Davis).

DOVEKIE: The last report of this species after the February sightings was of two off C. Hatteras March 1 (David Wright).

RAZORBILL: The winter invasion of this species continued on into March with the highest count being 750+ at C. Hatteras March 1 (David Wright). Also 77 were tallied from Avon to Rodanthe on March 5 and 39 were counted at Pea I. on March 6 (Steve Dinsmore, Susan Barrell). The latest record was of one at Oregon Inlet March 27 as noted by Dinsmore and Grove. Away from the Outer Banks, two were at C. Lookout March 24 (Paul Spitzer, fide John Fussell), one was picked up at Emerald Isle March 21 and later released (fide John Fussell), one was at Wrightsville Beach March 15 (Ricky Davis), and four were off Murrell's Inlet, SC March 5 (Lex Glover).

BAND-TAILED PIGEON: The Charlotte, NC bird present from February, was seen and photographed on into March when many observers had success locating the bird.

COMMON GROUND-DOVE: As this species continues its decline in the Carolinas, all reports are important. Especially interesting was the discovery of a nest at Edisto Beach, SC June 25 (John Cely).

BLACK-BILLED CUCKOO: Reports of this hard to find species are always noteworthy. Thus of interest was the one seen and heard in North Augusta, SC May 15 (Robin Carter, Caroline Eastman), one heard at Bear Pen Gap along the Blue Ridge Parkway May 21 (Henry and Elizabeth Link), one in Hertford Co., NC June 5 (Merrill Lynch), one heard at Simpsonville, SC June 16 and July 13 (Pete Worthington), and one at Index, Ashe Co., NC July 24 (Harry LeGrand). And finally, out of the normal breeding range was two different birds heard calling near the Dare Co. Bombing Range July

24&25 (John Fussell). Of interest was the fact that both birds were found in stands of Gordonia trees!

COMMON BARN-OWL Frank Enders, who has put out nest boxes in eastern North Carolina, reports that seven nests fledged 17 young this spring. Let's hope this success continues for this locally uncommon species. Also of interest was the single bird seen in Lincoln Co. June 14 (Simon Thompson).

NORTHERN SAW-WHET OWL: The only reports came from the usual Devil's Courthouse region along the Blue Ridge Parkway when one was seen and heard May 21 (Jeff and Anne Pippen, Lex Glover, Bert Fisher) and three were heard June 11 (Roger McNeill).

OLIVE-SIDED FLYCATCHER: The only report this season was of one near Mt. Mitchell along the Blue Ridge Parkway June 3 (Jimi and Nell Moore).

YELLOW-BELLIED FLYCATCHER: A very rare spring occurrence in eastern North Carolina was one seen and heard at Catfish L., Croatan Nat. Forest on May 21 (Jimi and Nell Moore).

WILLOW FLYCATCHER: Locally rare in spring was one heard near Bahama, Durham Co. May 7 by Harry LeGrand. Also one farther east at C. Lookout May 23 (Russ Tyndall, Bob Holmes) provided only the second Carteret Co. record.

GRAY KINGBIRD: There was a good flurry of sightings of this rare kingbird in North Carolina with singles at Stacy, Carteret Co. April 30 (Sam Cooper), Buxton June 1 (D. Dunmore), C. Lookout June 4 (Roger McNeill), and Frisco June 5 (Ned Brinkley, K. David).

SCISSOR-TAILED FLYCATCHER: This species was also reported unusually frequently with birds in Spartanburg Co., SC May 15 (Betty Pope, et al.), near L. Murray Dam, Lexington Co., SC June 26 (Stanley Rickard), near Harker's I., Carteret Co., NC July 1 (Jimi and Nell Moore), and in Chesterfield Co., SC July 20 (Bruce Sorrie).

TREE SWALLOW: One of the largest breeding groups ever found in the Carolinas was the 30+ found at Mackay I. Nat. Wildlife Refuge on June 19 by Harry LeGrand. This report is all the more interesting when one considers that the location is coastal!

CLIFF SWALLOW: This species has now been found nesting in areas not asssociated with large reservoirs and dams. Robin Carter and Caroline Eastman found nests under highway bridges along US 21 - SC 9 and Interstate 77 in Chester and Fairfield Co., SC this summer. One wonders just how common this species will become in the Carolinas in the near future.

BLUE JAY: A locally rare and unexpected occurrence was the one found at Portsmouth, NC on May 3 (Steve Dinsmore).

BROWN CREEPER: A low elevation record was provided by three on territory along the Chattooga River near Highlands (elev. 2600'-3000') on May 23 (Harry LeGrand).

BEWICK'S WREN: One was reported from the Joyce Kilmer/Slickrock Wilderness area on May 16 (Joe and Marc Poston). Birders in the Carolinas should be on the lookout for this extirpated species. This individual was probably a migrant but suitable habitat exists in our mountains and there could be a breeding pair somewhere.

SEDGE WREN: The tally of four on the Raleigh Spring Count April 30 was an exceptional number for an inland locality (fide Robert Hader)..

HERMIT THRUSH: Summer records of this species are always noteworthy, thus of interest was one singing on territory at Mt. Mitchell on June 21 (Jeff and Anne Pippen, Lex Glover) and from one to two on Roan Mntn. during June (Rick Knight).

SPRAGUE'S PIPIT: The Orangeburg Sod Farm individual remained there until at least March 11 (Robin Carter, Caroline Eastman).

CEDAR WAXWING: From two to seven in the Stumpy Point, NC area from July 15-31 (John Fussell), were most likely wandering immatures.

LOGGERHEAD SHRIKE: Encouraging is the report of eight on the Rowland BBS route in Robeson Co. and five more in the Maxton, NC area on May 30 (Harry LeGrand). Shrikes are also doing well at the Savannah River Site, SC where eight pairs with fledglings were observed this summer (Barny Dunning).

SOLITARY VIREO: This species seems to be increasing slightly at the eastern portion of its range. They are now scattered throughout the Sandhills area (Harry LeGrand) and five on territory in the Butner, Granville Co. area May 26 were a good number for that locality (Harry LeGrand, Steve Hall).

BLACK-WHISKERED VIREO: A bird acting territorial was found at C. Lookout, NC on May 23 by John Fussell and Bob Holmes. This bird was the third record for North Carolina and it obliged many observers during its lengthy stay. The last sighting was July 2 when Steve Dinsmore and Susan Barrell saw it briefly.

BLUE-WINGED WARBLER: One along the New River, Ashe Co., NC on June 18 (Will Cook, Susan Barrell) was of interest since this species seems to be spreading into more areas.

GOLDEN-WINGED WARBLER: One in northern Greenville Co., SC in late April and early May (Dennis Forsythe, Robin Carter, Caroline Eastman) was noteworthy, especially since this species has not been found breeding in the state in recent times.

"BREWSTER'S" WARBLER: An individual of this hybrid was found at New River State Park, Ashe Co., NC May 14 by Harry LeGrand. The bird was on territory and was singing a Golden-wing type song.

ORANGE-CROWNED WARBLER: A rare migrant was seen at Lee State Park, SC on April 9 (Robin Carter).

NASHVILLE WARBLER: The only spring migrant report received was of one in the Joyce Kilmer/Slickrock Wilderness Area May 18 seen by Joe and Marc Poston.

MAGNOLIA WARBLER: Rare coastal spring migrants included singles at Huntington Beach State Park, SC (Jack Peachey) and in the Dismal Swamp, Camden Co., NC (Harry LeGrand, John Fussell), both on May 18.

YELLOW-RUMPED "MYRTLE" WARBLER: Rick Knight found one territorial male on Roan Mntn. June 4. This was about a mile from the location of last year's nesting spot.

YELLOW-RUMPED "AUDUBON'S" WARBLER: This western form is rare in the Carolinas, thus noteworthy was the male found at Little River, SC April 12 by Rick Murray.

BLACKBURNIAN WARBLER: Rare spring migrants included birds on the Univ. of SC campus May 10 (Caroline Eastman), along the Flat River, Durham Co., NC May 7 (Harry LeGrand), and in the Dismal Swamp, Camden Co., NC May 17 (Harry LeGrand, John Fussell).

BAY-BREASTED WARBLER: This species is usually hard to find in eastern North Carolina in spring, thus of interest was one at Roanoke Rapids April 30 (Frank Enders) and two in the Dismal Swamp, Camden Co. May 17 (Harry LeGrand, John Fussell).

PRAIRIE WARBLER: After last year's high count on the Milltail Creek BBS in Dare Co., NC, Merrill Lynch found 80 on May 29.

CERULEAN WARBLER: Locally rare migrants included one on the Univ. of SC campus May 13 (Caroline Eastman) and one on the Raleigh Spring Count April 30 (fide Robert Hader).

BLACK AND WHITE WARBLER: This species is a locally rare breeder in the coastal plain of North Carolina. This season one was on the Milltail Creek BBS May 29 (Merrill Lynch) and up to three different birds were on territory in the Green Swamp during late May and early June (Rick Murray, Ricky Davis).

AMERICAN REDSTART: This species was found along the C. Fear River from Bladen to Brunswick Co. this summer (Sam Cooper). This is another locally rare coastal plain breeding species.

PROTHONOTARY WARBLER: The Milltail Creek BBS in Dare Co. also produced a good total for this species when 84 were found May 29 by Merrill Lynch.

WORM-EATING WARBLER: The count of 27 on the Milltail Creek BBS May 29 (Merrill Lynch) was impressive. A Worm-eating on territory in Montgomery Co., NC June 17 was a good find (Harry LeGrand).

SWAINSON'S WARBLER: Four were found along the Neuse River in Johnston Co., NC May 12 for a good count in that part of the state (Merrill Lynch, Micou Browne, Mark Thompson).

OVENBIRD: Nine on the Milltail Creek BBS in Dare Co. May 29 was a good count for the coastal plain (Merrill Lynch).

LOUISIANA WATERTHRUSH: This species is a very rare breeder in southestern North Carolina. This summer an adult with young was seen near Thomasboro, Brunswick Co. in late May (Lynne Petch, Diane Hahn). Also they were noted along the Cape Fear River from Bladen Co. to Brunswick Co. (Sam Cooper).

WILSON'S WARBLER: The only spring report was of one near Landrum, SC May 20 as noted by Bob Wood.

CANADA WARBLER: A very good count for eastern North Carolina was the four seen in the Dismal Swamp, Camden Co. May 18 (Harry LeGrand, John Fussell). Also one at the Congaree Swamp Nat. Monument, SC May 14 (Robin Carter) was locally rare.

SCARLET TANAGER: In North Carolina three territorial birds in Thomasboro, Brunswick Co. (Rick Murray) and one along the C. Fear River, Bladen Co. this summer (Sam Cooper) were locally rare. This species seems to be continuing its eastward spread in the area.

WESTERN TANAGER: This rare but regular visitor was reported twice this spring. A male was at Bear I., SC March 5 (Robin Carter, Caroline

Eastman) and a female was on the Jordan Res. Spring Count on May 1 (Barbara Roth, Carol Tingley, Barbara Brooks).

PAINTED BUNTING: An out of range bird was found at Moore, Spartanburg Co., SC when a male was seen the third week of May (fide Lyle Campbell). This provided the second county record in as many years!

DICKCISSEL: A rare local record was the female found at Spartanburg, SC May 22 by Robin Carter and Caroline Eastman. Of more importance were the reports of summering birds in the Carolinas. From two to three were near Waco, Gaston Co., NC in June (Simon Thompson), one pair was near Gowensville, Greenville Co., SC July 1 (Thompson), and four immature birds were found at a Laurens Co., SC site July 22 by Pete Worthington. Also of note was the single bird seen at Falls L., NC July 22 (Ricky Davis), probably just a wandering individual.

LARK SPARROW: An adult near Pelion, Aiken Co., SC June 2 (Steve Patterson) was considered a late spring migrant. And likewise, the bird seen at Beaufort, NC July 21 (Herb Hendrickson) was probably an early fall transient.

GRASSHOPPER SPARROW: One was found at Port Royal, Beaufort Co., SC March 7 (Robin Carter, Caroline Eastman) for a rare spring sighting. Also of note was the presence of three singing birds at the Orangeburg Sod Farm July 31 for a first local summer record (Carter, Eastman).

HENSLOW'S SPARROW: This species continues to warrant close monitoring in our area. Encouraging is the news that the breeding colonies at the VOA sites in eastern North Carolina were in healthy shape this spring. In May John and Paula Wright censused the areas and found 59 singing males at one site and 70 males at another site. These colonies are of vital importance to the species and management plans for mowing the sites must be closely watched.

BOBOLINK: This species is often seen in the summer, but most are just non-breeding wanderers. Thus of note, only the second or third documented breeding record for North Carolina was provided by at least three pairs nesting successfully at Calvert, Transylvania Co. in June and July (fide Norma Siebenheller).

BREWER'S BLACKBIRD: This rare and local species was found in South Carolina twice with a good count of 13 near Landrum March 27-29 (Simon Thompson) and two in Spartanburg Co. in March (Alan Rose, Chris Thornberg, fide Lyle Campbell).

NORTHERN "BALTIMORE" ORIOLE: One on the Rowland BBS, Robeson Co., NC on May 30 (Harry LeGrand) was considered a late migrant.

NORTHERN "BULLOCK'S" ORIOLE: The female which spent the winter at a feeder in Wilmington, NC was last seen March 20 (Greg Massey).

RED CROSSBILL: In North Carolina this species seemed much more numerous in the mountains this year as compared to the last several years. In the Bear Pen Gap to Devil's Courthouse area on the Blue Ridge Parkway, from 35 to 60 birds were present (Roger McNeill, m. ob.). And up to 40 were found by several observers in the Mt. Mitchell area this summer. Also one at Caesar's Head State Park, SC in June (Lex Glover) was a good find there.

AMERICAN GOLDFINCH: In North Carolina rare summer birds were found to the east of the normal range in Croatan Nat. Forest June 10 and near Havelock July 2 as noted by John Fussell.

EVENING GROSBEAK: One of the best counts of spring birds was the 100+ at Lugoff, SC during March and April (Lex Glover). Some late spring birds included one at C. Lookout, NC May 29 (Russ Tyndall, Patricia Earnhardt) and one at Morehead City, NC June 1 (fide John Fussell).

## White-tailed Kite in Western North Carolina: A Correction

NORMA and BILL SIEBENHELLER
187 Glen Cannon Drive
Pisgah Forest, NC 28768

Due to confusion and incompetence on the part of the editors, the last paragraph of this paper published in The Chat 59(1):26-27 should have read:

The White-tailed Kite has been described by Potter, *et al.* (1980) as a "very rare accidental" in the Carolinas. Pearson et al. (1959) list one sight record, in Davie County, NC, on 21 November 1946. A single bird was reported from New Hanover County, NC, on 3 January 1957 (Chat 21:70–71). More recently, Eric Dean and Clyde Sorenson photographed a White-tailed Kite at Fort Fisher in New Hanover County on 8 April 1989 (Chat 54:55; NCSM Photo collection #130–132, 137–145, 270). this report constitutes the third accepted record for the species (Report of the North Carolina Bird Records Committee 1993, Chat 58:85). At present, records form North Carolina do not indicate any trend in season of occurrence for this species in the state.

We apologize for any problems this may have caused.—H. T. Hendrickson

## BOOK REVIEWS

### A BIRDER'S GUIDE TO COASTAL NORTH CAROLINA

John O. Fussell, III. University of North Carolina Press, P. O. Box 2288, Chapel Hill, NC 27515. Hardback. 540 pp. including index.

The North Carolina coastal region, particularly the Outer Banks and coastal sounds, has been famous as a place to see huge numbers of birds, both as individuals and as diverse species for over a hundred years. Its reputation started as a heaven for duck hunters and grew with the popularity of bird watching as a place to find rare gulls, seabirds, shorebirds, and other species. Improvements in the system of roads and highways have made the area increasingly accessible and has resulted in a large number of people who are interested in birds making an almost constant pilgrimage to the area.

While some of the areas in the region such as Pea Island, Cape Hatteras and Lake Mattamuskeet have achieved a world-wide reputation among serious birders and are well-known and often visited, there has been a strong suspicion that there must be many other places that are also interesting for birds, but for various reasons are not as well known. Birders have long awaited a serious, comprehensive attempt to present these alternative places to see birds in the region.

John Fussell has finally accomplished the goal of putting all this information together in one volume on where to go in coastal North Carolina to find birds. It is a monumental work. It is almost as huge as the area it describes. As in most guides of this kind, it is organized into three parts; a general introduction to the area, a description of the sites, and an annotated list of bird species that are most likely to be of special interest. I believe that he has done a superb job on all three sections.

If the book has any fault at all, it is that it contains too much information. Fussell has enough experience in these areas to be able to specify the best climatic conditions under which to bird nearly every site. This has the potential for being annoying if you have to schedule a weekend expedition to the site three months ahead of time and when you get there the wind is blowing from the wrong direction. Of course, this does provide a great excuse for why you didn't see the bird that you really wanted. There is also a tendency to repeat the same information for each different site. For example, Black-throated Green Warblers stop singing earlier than most other warblers so if you want to maximize your chances of finding them, make sure that you get there before mid-May. This piece of advice is repeated at least six times.

I have found this guide to be extremely helpful in pointing out sites that are worth visiting in areas that were unfamiliar to me and in providing tips on how to bird places that I already knew. It has also given me some clues about sites that I usually rush past while traveling between home and the more traditional birding hot spots.

The text is remarkably free of typographic errors which is noteworthy in a work this large. Both the author and the editors are to be congratulated on a job well done.

This book is a necessity for all serious birders in the Carolinas and is highly recommended to any birder who wants to visit the region. In conjuction with Simpson's Guide to the Blue Ridge Mountains, (see review in The Chat vol. 57(1):23-24) North Carolina's birding areas are now exceptionally well bracketed. This leaves only the relatively dull, and boring Piedmont (where I do most of my birding) needing a birders guide. — H. T. Hendrickson

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(USPS 101-020)

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**Quarterly Bulletin of Carolina Bird Club, Inc.**
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# The Chat

Vol. 59 SUMMER 1995 No. 3

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Quarterly Bulletin of Carolina Bird Club, Inc.
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# THE CHAT

VOL.59 (USPS 101-020) SUMMER 1995 NO. 3
Published by the Carolina Bird Club, Inc.

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THE CHAT (USPS 101-020) is published quarterly for $12.00 by the Carolina Bird Club, Inc., with headquarters at the North Carolina State Museum of Natural Sciences, 102 N. Salisbury Street, Raleigh, NC 27603. Second-class postage paid at Raleigh, NC.
POSTMASTER: Send address changes to Carolina Bird Club, THE CHAT, P. O. Box 29555, Raleigh, NC 27626-0555.

PAGE CHARGES: Authors who have funds available for page charges are requested to remit same at the rate of $40.00 per page. CBC Headquarters will provide statements required for your business records.

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## Report of the North Carolina Bird Records Committee 1994

This report enumerates the decisions of the Carolina Bird Club's North Carolina Bird Records Committee during 1994.

Accepted as Valid. The reported identification is judged to be accurate and the bird is judged to be of wild origin. Photographs for all accepted species have been deposited at the N.C. Museum of Natural Sciences.

**Pacific Loon** (*Gavia pacifica*). One was observed by Sam Cooper and Kevin Markham on the ocean near the south end of Wrightsville Beach on 19 February 1994. This is the second accepted record of Pacific Loon for the state. The species is already on the Official List, based on a bird photographed at Cape Hatteras on 15 May 1987 (Chat 53:8).

**Pacific/Arctic Loon** (*Gavia pacifica/arctica*). One individual of this complex was observed by Steve Dinsmore, Susan Grove, Pat Moore, Diane and Keith Andre, and Marcia Lyons in the ocean at Rodanthe on 5 February 1994. The bird was reported only to this complex; the Committee accepted this identification to the complex, but not to either individual species. Pacific Loon is already on the Official List (see above).

**Western Grebe** (*Aechmophorus occidentalis*). One was observed at the tidal pond at Cape Hatteras Point from 8 November to 29 December 1993. Paul Lehman and party made the initial discovery, and it was photographed by Ken Hollinga. This is the second accepted record for the state, and acceptance of the photograph moves the species from the Provisional List to the Official List.

**Western Grebe**. Two grebes were seen at the Fort Fisher basin on 6 December 1993 by Greg Massey. This is the third accepted record for the species in North Carolina. As indicated above, the species is now on the Official List.

**Cape Verde Petrel** (*Pterodroma feae*). One was seen by Mike Tove, Todd Hass, Ned Brinkley, and about 18 other observers in the Gulf Stream, 48 miles southeast of Oregon Inlet, on 30 May 1994. Tove's written description and photographs of the bird were accepted by the Committee, to this taxon. The Cape Verde taxon is considered to be a full species by Sibley and Monroe (1990) and Clements (1991), based on a study of the Soft-plumaged Petrel complex by Bourne (1983), who considered that the complex consists of *P. feae* and two other species. This becomes the first accepted record of Cape Verde Petrel for North Carolina, as well as the first accepted record for North American waters. The Committee has previously accepted two sight records of the Soft-plumaged Petrel (*P. mollis*) complex; thus, this complex was on the Provisional List. A 1992 report, with photographs, was given an Unresolved vote by the Committee last year; this report likely will be voted on again on a second ballot. Acceptance of this 1994 record adds Cape Verde Petrel to the Official List, by replacing Soft-plumaged Petrel on the Provisional List. The Committee believes that all North Carolina reports of the Soft-plumaged Petrel complex refer to the Cape Verde Petrel species; however, not

all birds in North Carolina waters have been seen well enough or described thoroughly enough for Committee acceptance to Cape Verde Petrel.

**Brown Booby** (*Sula leucogaster*). One, apparently a subadult, was seen and photographed in the Gulf Stream off Oregon Inlet on 9 July 1994. Several dozen birders, including Brian Patteson, Todd Hass, and Harry LeGrand, observed the individual at close range, and Patteson provided a photograph of the booby to the Committee.Acceptance of the photograph moves the species from the Provisional List to the Official List. There was one previously accepted sight record for the state.

**Ross' Goose** (*Chen rossii*). One was observed, and photographed, from 2 to at least 7 January 1994 along NC 191 in northwestern Henderson County. Simon Thompson and Marilyn Westphal provided written details, and Wayne Forsythe provided photographs. This is the first accepted record of Ross' Goose for a location away from the lower Coastal Plain of North Carolina. The species is already on the Official List, with many coastal and several tidewater records.

**Swainson's Hawk** (*Buteo swainsoni*). An immature was seen at Pea Island on 4 October 1993 by Eric Dean, Steve Dinsmore, and Susan Grove. Dean and Disnmore provided descriptions, and Dinsmore provided photographs. Because this is the third accepted record for Swainson's Hawk in the state, the species is moved from the Provisional List to the Official List. This also represents the first photographic documentation of the species for North Carolina.

**Little Gull** (*Larus minutus*). An immature was seen by Ricky Davis at Jordan Lake on 6 March 1994. The bird was seen on several more occasions later in the month. This is the first accepted record of Little Gull in the state from an inland site.

**California Gull** (*Larus californicus*). An adult was closely observed at Cape Hatteras Point on 27 December 1993 by John Wright, Mike Tove, Bob Lewis, Allen Bryan, and others. Lewis provided photographs for the Committee. This is the second accepted record of the species for North Carolina; the species was already on the Official List, based on an accepted photograph of a bird at the Newport landfill in January 1993.

**California Gull**. An adult was observed by Steve Dinsmore and Susan Grove on 5 and 6 February 1994 on the beach near Avon. It is possible that this is the same individual as that at Cape Hatteras Point (see above). However, as there were many thousands of gulls in the Cape Hatteras - Avon area during the winter of 1993-94, two birds could certainly have been involved. This is the third accepted record for North Carolina.

**Atlantic Puffin** (*Fratercula arctica*). One was seen in flight off Oregon Inlet on the remarkable date of 14 August 1993 by Ned Brinkley, Nathan Dias, and other observers. This is the first record of the species for North Carolina. Because the bird was not photographed, the species is placed on the Provisional List.

**Band-tailed Pigeon** (*Columba fasciata*). One was present for over a month in a residential section of Charlotte in late winter and early spring of 1994. David Wright, Taylor Piephoff, and other Charlotte area birders made the initial report.

The Committee accepted written details provided by Harry LeGrand, of an observation of the pigeon on 12 March. Acceptance of photos taken by Steve Dinsmore and Derb Carter moves the species from the Provisional List to the Official List. The Committee considered the possibility that the bird could have been an escaped individual; however, there were no Unaccepted Origin votes. There is a previously accepted sight record of a pigeon seen along the Blue Ridge Parkway in 1980 (Chat 44:106-107).

**Eurasian Collared-Dove** (*Streptopelia decaocto*). One was observed perched on a telephone wire near Salvo on the Outer Banks on 31 July 1994 by Harry LeGrand, Merrill Lynch, and Derb Carter. Carter provided photographs of the bird for the Committee. A week later, on 5 August 1994, a dove appeared in Buxton, where it was observed and photographed by Ned Brinkley and B.J. Rose. The Committee considered that these two reports were likely of the same individual. The collective report, including photographs, was accepted. No Committee member felt that the individual might represent an escaped bird. This species is rapidly expanding its population in Florida and has been seen on numerous recent occasions in Georgia; thus, sightings in the Carolinas seemed inevitable. Acceptance of this first report of Eurasian Collared-Dove for North Carolina places the species on the Official List.

**Black-whiskered Vireo** (*Vireo altiloquus*). One bird, singing on territory, was seen repeatedly from 23 May into mid-summer 1994 at Cape Lookout in Carteret County. It was initially discovered by John Fussell and Bob Holmes. This is the third accepted record for the state; the species is already on the Official List.

Unaccepted Sighting. The bird is judged to be a species other than that reported, or the bird is insufficiently documented for identification to the species reported.

**Black-chinned Hummingbird** (*Archilochus alexandri*). One reported from a hummingbird feeder in southeastern North Carolina during January 1994 was not accepted. Though the bird was well described, with a sketch provided, and was probably a Black-chinned, identification of non-adult male hummingbirds is extremely tricky. The possibility of it being a Ruby-throated Hummingbird (*A. colubris*), which has been definitively found on several occasions in winter in the state, cannot be completely ruled out. It would be best for an accepted Black-chinned to be an adult male, or a female or immature that is captured and measured. Though it is likely that some or many of the female or immature hummingbirds that winter at feeders in the state are Black-chinneds, as Georgia now has many records for the species, there remains no accepted record of this species for North Carolina.

**White-winged Tern** (*Chlidonias leucopterus*). One in basic plumage, reported from the southeastern coast in January 1994, was not accepted. The description of this bird was baffling, and no Committee member voted to accept the record. The species has probably not been convincingly reported from the United States in winter. There are no accepted records for North Carolina.

**Sprague's Pipit** (*Anthus spragueii*). One reported at Chapel Hill on 9 May 1959 (Chat 23:89) was not accepted.

**Sprague's Pipit**. One reported in Wake County near Raleigh on 18 March 1972 (Chat 37:25) was not accepted.

**Sprague's Pipit**. A report of as many as 12 birds near Rocky Mount, from 5 January to 9 March 1975 (Chat 41:51), was not accepted.

**Sprague's Pipit**. A report of one at Jordan Reservoir on 12 April 1982 (Chat 46:121) was not accepted.

The Records Committee has taken a tough stance on reports of Sprague's Pipit in North Carolina. This is a difficult species to identify, in part because there are a number of other pipits, and even sparrows, that can be confused with it. The reports above could well have been of American Pipits, or even Vesper Sparrows. Pipits other than American were also not ruled out. Habitats of most of the above reports seemed unlikely for Sprague's, as did the behavior of the birds. Sprague's Pipits typically inhabit short to moderate grassy areas and are difficult to see until flushed, when they usually tower high into the air and then drop back into grasses. They are seldom found on bare ground of plowed fields, lake shores, and dirt roads.

In summary, there is only one accepted record of Sprague's Pipit for the state. A well-described bird was seen and heard at Roan Mountain on 27 October 1991.

Unresolved. Further consideration by the Committee is needed.

**Bermuda Petrel** (*Pterodroma cahow*). One was reported from the Gulf Stream off Oregon Inlet in the summer of 1993. This report received more than 50% Accepted Sighting votes but more than 25% Non-accepted votes, all of which were Abstain votes. The report will be sent for outside review. At the present time, Bermuda Petrel has not been officially documented (specimen, photograph, or even an accepted sight record) from North American waters.

**Red-billed Tropicbird** (*Phaethon aethereus*). An immature was reported from the Gulf Stream in July 1994. The written description received more than 50% Accepted Sighting votes but more than 25% Non-accepted votes. Such a report would normally be sent for outside review. However, a video of the bird was not viewed by the Committee because of lack of a video cassette recorder at a Committee meeting. Therefore, the report will be voted on again in 1995, following a viewing of the taped material. Red-billed Tropicbird is already on the Official List, with approximately five state records. However, this is the first report for the state in over ten years, despite an increasing abundance of pelagic trips being taken into North Carolina waters during this period.

**Brown Booby**. One seen, and photographed at a distance, along the Carteret County coast in summer 1993 received more than 50% Accepted Sighting votes but more than 25% Non-accepted votes. There seems little doubt that the bird was actually a Brown Booby, but the details were very skimpy and did not adequately rule out other sulids. The photographs did not document the record because of the small size of the bird in the photo. At the time of this report, there was just one accepted sight record of Brown Booby for the state. However, Brown Booby is now

on the Official List for North Carolina (see above).

**Sprague's Pipit**. One seen at Pea Island on 30 November 1965 (Occasional Papers of the North Carolina Biological Survey, 1986-11:48-49) received more than 50% Accepted Sighting votes but more than 25% Non-accepted votes. The report will be sent for outside review.

Prior to these voting results, the Official List for North Carolina stood at 402 species, and the Provisional List at 20 species (Chat 58:109-113). The voting results listed above yield an Official List of 408 species; added in 1994 are Western Grebe, Cape Verde Petrel, Brown Booby, Swainson's Hawk, Band-tailed Pigeon, and Eurasian Collared-Dove. The Provisional List has dropped to 16 species, as Western Grebe, Soft-plumaged Petrel complex (= Cape Verde Petrel), Brown Booby, Swainson's Hawk, and Band-tailed Pigeon have been moved to the Official List; and Atlantic Puffin has been added.

Persons interested in obtaining a copy of the "Regulations Governing the Operation of Bird Records Committees" should write to Harry LeGrand, the North Carolina committee Chairman, 331 Yadkin Drive, Raleigh, NC 27609.

Committee members: Harry E. LeGrand, Jr., Chairman
Derb S. Carter, Jr.
Samuel Cooper
Richard J. Davis
John O. Fussell III
Simon R.B. Thompson
Michael H. Tove

LITERATURE CITED

Bourne, W.R.P. 1983. The Soft-plumaged Petrel, the Gon-gon and the Freira, *Pterodroma mollis, P. feae*, and *P. madeira*. Bull. Brit. Ornithol. Club 103:52-58.

Clements, J.F. 1991. Birds of the World: a Check List. Ibis Publishing Company, Vista, CA.

Sibley, C.G., and B.L. Monroe, Jr. 1990. Distribution and Taxonomy of Birds of the World. Yale University Press, New Haven, CT.

## Report of the South Carolina Bird Records Committee 1994

The Records Committee completed action on 25 reports during 1994, and presently has an additional 11 (all received in November and December) under review. Two (2) reports were rejected, and twenty-three (23) accepted. The accepted reports led to the addition fo the SC state list of 5 new species, and 1 additional

genus (*Catharacta* -Skua sp?), which now stands at 399. Of these additions 4 were to the definitive list, and 2 to the provisional list. One additional species was moved from the provisional to the definitive list.

One of our members, Roger Clark, has moved out of state. He has been replaced on the Committee by Bill Hilton, Jr., a well-known birder and bander from York County, maintaining the membership at nine.

A review of the 1994 activity follows.

Accepted 23 reports (Note: some of these are multiples of the same bird)

**Brown Pelican**-(08-94-1). The first Lake Hartwell (second upstate) sighting of this species was by Don Cox on 21 August. The bird appeared to be in poor health, and could not be relocated later in the week.

**Black-bellied Whistling-Duck**-(07-94-1). First sighted on 30 July by D. Harrigal, P. Laurie and C. Floyd at the Donnelly WMA (Ace Basin), they stayed for some time, and were seen by many,and photographed by several individuals. There were at least two birds (3-5 were also reported). None were banded and their behavior was at least as "wild" as birds in Texas rice fields. The Committee judgement was that these were most likely displaced by tropical storm Alberto, probably from the Florida pahhandle population. Added to the SC definitive list on the basis of photographs submitted by P. Laurie and J. Peachey.

**Cinnamon Teal**-(09-94-2). First seen by N. Moore at Huntington Beach SP on 9 September, and photographed by her and T Spires on 10 September, furnishes another record of this western stray for SC. As always with waterfowl, some discussions of possible aviary escapes were held, but the majority of the committee judged the bird (an eclipse plumaged male) to be wild.

**Merlin**-(12-43-2). A rare upstate winter report by S. Patterson occurred during the Rocky River Christmas Count.

**Sharp-tailed Sandpiper**-(07-94-2). One was seen on 24 July at the Orangeburg Sod Farms by R. Carter and C. Eastman. It was also seen on 25 July by R. Maxwell, and on 28 July by P. Worthington. The bird was an adult, just coming out of alternate plumage, and kept company with 3-4 Pectoral Sandpipers that were in alternate plumage. No photographs were obtained. The committee has added this species to the SC provisional list.

**Skua** (sp?)-(08-93-4). One was seen by D. Forsythe, with photographs by T. Spires 40 miles off Charleston on 2 August 1993. It was judged to be most probably a South Plar Skua, but the photographs are inconclusive, and neither Forsythe nor Spires got a close enough look to make the call. The committee has added this species to the SC definitive list as *Catharacta* sp?.

**Parasitic Jaeger**-(02-94-5). One was seen off Litchfield Beach on 27 February by R. Carter and C. Eastman. The bird was a adult, light-phase bird and very well described.

**Little Gull**-(01-94-6 & 02-94-1). Sightings of two different birds were reported by H. LeGrand on 30 January and R. Carter on 13 February, both in the

Huntington Beach SP-Garden City area. One bird was an adult, the other was a first winter bird. Both reports are accepted, and the species is added to the SC definitive list (third and fourth accepted reports) although no photographs or specimens exist as yet.

**Dovekie**-(02-94-4). One seen off Litchfield Beach by R. Carter and C. Eastman was in basic plumage.

**Thick-billed Murre**-(01-94-4). An almost unbelievable flock of up to 12 was seen by R. Carter and several other on 29 December off Litchfield Beach during the winter meeting of the Carolina Bird Club.

**Black Guillemot**-(01-94-5). One was seen at the same time and place as the Thick-billed Murres at the CBC winter meeting. This is the second SC report in two years.

**Eurasian Collared-Dove**-(09-94-1). This species colonized North Myrtle Beach some years ago according to local residents. Alerted by Pantelidis, who stumbled upon the birds on 4 \September, R. Carter photographed them on 5 September. The photos clearly show the differences between this species, which is naturally and rapidly colonizing the southeastern United States from a base in the Bahamas, and the caged Collared Dove, which is a common escape, but apparently not an established breeder. The committee has added it to the definitive list.

**White-winged Dove**-(04-94-1). A bird sighted at a feeder at the Savannah River Ecology Labs by K. Buhlman on 15 April was one of the infrequent reports over the years in South Carolina.

**Olive-sided Flycatcher**-(10-93-1). One was seen by R. Carter and C. Eastman on 3 October 1993 in the Congaree NM. This is the second October record from the Broad-Congaree River drainage system, the first was a bird in October of 1992 reported by P. Davies and P. Worthington in the Broad River WMA.

**Varied Thrush**-(10-93-2). One was seen and photographed by F. Bremer at Edisto Beach on 6 & 10 October 1993 for a first South Carolina record. It is added to the SC definitive list on the basis of the clear photographs. A second bird, seen on the 1993 Spartanburg Christmas Count has just recently been submitted to the SCBRC, and is now in review.

**Sprague's Pipit**-(02-94-2 and 2A). One was seen by G. McCoy on 6 February and by K. Calhoun on 19 February 1994, and many others into March at the Orangeburg Sod Farms. This was a most delightful and accomodating rarity, which was fairly easy to see with a little persistence. Other than two reports from the Savannah River Plant, this is the first inland record for South Carolina.

**Golden-crowned Sparrow**-(12-93-3). One was reported by P. Nugent on 26 December in the Francis Marion Forest during the Charleston Christmas Count. This sighting caused much debate, but was finally accepted on a split vote.

**Yellow-headed Blackbird**-(8-93-3). C. Belsen, D. Cox and others saw and heard very briefly an odd blackbird at Twonville on 22 August 1993. The consensus of the group, after checking the call against tapes of this and other blackbirds, was that this was an immature, probably female bird. There are a few other Piedmont records for the species.

**Common Redpoll**-(01-94-1 & 3). Separate sightings were made by J. Wren and S. Tompson in Spartanburg County on 7 January and G. Sowell in Richland County on 17 and 23 January. This was a redpoll year in the East, and the writer knows of at least two more undocumented sightings during January and February of the very rare visitor to South Carolina.

Not accepted - Two reports

**Little Gull**-(12-93-1). An inland sighting on Lake Murray on 5 December of a small gull was not accepted at this species, as the observers were not able to see the diagnostic underwing pattern and wing shape.

**Vaux's Swift**-(1-94-2). Two birds reported in flight at the University of South Carolina campus in Columbia in 24 January were not accepted as the report does not clearly exclude Chimney Swift. This is, however, accepted as the first winter report of a South Carolina *Chaetura* swift.

We wish to thank all the submitters for their time and effort in preparing reports. We also wish to remind those who submitted particularly unusual records (First state, etc.) that the actions of the SCBRC, and this report, do not meet the criteria of publication, i.e. full documentation in a journal to establish a permanent record. To do this, the original sumbitter, or a collaborator, should submit a note for publication in The Chat through Dennis Forsythe, South Carolina Field Notes Editor.

Respectfully submitted

P. L. Worthington, Chairman and Secretary
Robin Carter
John Cely
Steve Compton
Dennis Forsythe
Sidney Gauthreaux
Lex Glover
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**CBC Rare Bird Alert**
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# General Field Notes

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**NOTICE**

Publication of any unusual sightings of birds in the Field Notes or Briefs for the Files does not imply that these reports have been accepted into the official Checklist of Birds records for either North or South Carolina. Decisions regarding the official Checklists are made by the respective State Records Committees and will be reported upon periodically in THE CHAT.

## Two Records of Atlantic Puffin for North Carolina

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The Atlantic Puffin (*Fratercula arctica*) has been found to be a regular winter resident in waters off southeastern Virginia in recent years. Brian Patteson (pers. comm.) has found the species on six pelagic trips east of Virginia Beach, VA, from 1991–94; his dates range from 2 February to 6 March, with a peak of 32 birds on 15 February 1992. Despite thise records being within 30 miles of North Carolina waters, until 1993 there were no records of the puffin for North Carolina. This paper documents two records of the Atlantic Puffin in North Carolina waters.

At least 20 observers, including the junior author, saw a puffin in alternate plumage on the unseasonable date of 14 August 1993, between Oregon Inlet and the Gulf Stream. The bird was seen primarily in flight, at distances as close as 40 yards, for at least four minutes. The puffin was a plump, football-shaped bird that was dark above and light below, with a brightly-colored bill. Its belly and breast were white, whereas the back, wings, and crown were black. The bird had a dark collar around its neck, a dark crown, and a white face. Its bill was still brightly colored, with yellow separating the orange outer bill from what appeared as a gray area.

Approximately 15 observers, including the senior author, saw a puffin in basic plumage on 18 February 1995. The observation was made in the vicinity of "The

Cigar", an underwater ridge perhaps 25 miles east of northern Currituck Banks, just a few miles south of the Virginia line. The bird was spotted in the water, about 75 yards from the boat. It was viewed in the water for about a minute before it flew off. The stocky body, with the yead seemingly one-third the size of the body, was immediately apparent. This individual was mostly dark on the body, with a large round or elliptical dusky patch covering the side of the head that contrasted with the blackish plumage. The huge triangular bill merged with the head. The distal portion of the bill had some dingy red or orange color, but most of the bill was dark.

Neither of these puffins was photographed. Thus, the species has been placed on the Provisional List for North Carolina (North Carolina Bird Records Committee, *Chat* p. 86 this issue).

## Confirmed Nesting of Cerulean Warblers in Rutherford County, North Carolina

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Cerulean Warblers (*Dendroica cerulea*) are uncommon summer residents in Chimney Rock Park, Rutherford County, North Carolina, and over the past three years one to three territorial males have been observed annually. Despite fairly thorough searching over the years no evidence of nesting had been obtained in the park until June 1990. The presence of Cerulean Warblers has been noted at Chimney Rock Park by Simpson (1992:238, 305) and Thompson (Chat 54:96), but no details of nesting observations in the park have been previously published.

Although Simpson mentions that Cerulean Warblers nest in "mature open deciduous forest, particularly where large Tulip trees (*Liriodendron tulipifera*) dominate in cove hardwood forests" (Simpson 1992:304), this habitat is not indicative of the site in Chimney Rock Park. Here the forest type is of a highly disturbed nature which can best be described as mixed oak (*Quercus rubra, Q. prinus* and *Q. velutina*) over Dogwood (*Cornus florida*), but also includes Hickory (Carya spp.), Black Locust (*Robinia pseudoacacia*) and Tulip tree.

On 17 June 1990 two male Cerulean Warblers were heard singing around the upper parking lot in Chimney Rock Park at an elevation of 1965 ft, and a single female was seen feeding in a nearby Paulonia Tree (*Paulonia tomentosa*). After several minutes she flew to a nest high in a tall Black Locust over the parking area, where she proceeded to brood. At this stage it was not possible to determine whether the nest contained eggs or young birds.

The small nest was located about 70–80 feet up on the upper surface of a thin horizontal limb at the base of a small vertical branch, and was about three inches across. It seemed to be composed of small plant stems and fibers bound into a two-

inch deep cup-shaped nest.

Upon resuming observation at the nest site on the morning of 30 June I saw that three juvenile birds were easily visible in the nest. They were still covered with patches of down feathers, although the distance was too great to tell if their eyes had opened yet. Even from the ground the yellow gape was easily visible with a 25x telescope. The female apparently did all of the brooding and all of the feeding. In over three hours of observation, the male was not seen. The female fed the young approximately every four minutes, but the distance was too great to determine the identification of the food items brought to the nest.

The female Cerulean Warbler was still feeding the three young birds on 1 July, and at that time their begging calls could easily be heard from the ground below. There was still no sign of the male bird. I had no chance to check the nest again until 8 July. By then the young birds had fledged and both adults and young birds were not seen again in the nest area.

## LITERATURE CITED

Simpson, Marcus B. Jr. 1992. Birds of the Blue Ridge Mountains. University of North Carolina Press, Chapel Hill.

## Observation of a White-winged Dove (*Zenaida asiatica*) on the Upper Coastal Plain of South Carolina

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On 15 April 1994, an adult White-winged Dove (Zenaida asiatica) was sighted at a bird feeder at the Savannah River Ecology Laboratory, located at the northern boundary of the U.S. Department of Energy's Savannah River Site in Aiken County, South Carolina. At 1730 h, while observing birds that were congregating at the feeder, we noticed a large dove sitting quietly in the foliage nearby. We were able to clearly see white wing-bars and a blue stripe that extended from the bill and encircled the eye. We used Peterson (1980) to confirm our identification. The bird remained in that position for 15 minutes after which it flew away and was not seen again until the next morning. At approximately 0930 h on 16 April it spent several minutes at a bird bath at the same location. Our observations illustrate the value that bird feeders can serve towards obtaining species distributional information.

White-winged Doves are native to the southwestern United States southward to Peru and they have become established in southern Florida as a result of release by

humans (American Ornithologists' Union 1983). We are aware of only 5 other accepted observations of White-winged Doves in South Carolina; all were recorded during winter in coastal areas (Post and Gauthreaux 1989, McNair and Post 1993). If accepted by the South Carolina Bird Records Committee, our record will be the sixth documented South Carolina record, the first spring record, and the most inland occurrence reported.

None of these observations indicate that these birds are expanding their breeding range since most sightings have been of one or a few individuals. It is not known what effect the White-winged Dove might have on native bird communities. Ornithologists should be on the lookout for nesting activity in South Carolina.

Acknowledgments: Manuscript preparation was supported by DOE contract DE-AC09-76SR00819 with the Savannah River Ecology Laboratory and the University of Georgia. We thank Yvonne Kling for tending the bird feeder.

LITERATURE CITED

American Ornithologists' Union. 1983. Checklist of North American Birds. American Ornithologists' Union, Philadelphia. 6th Edition.

McNair, D. B., Jr. and W. Post. 1993. Supplement to Status and Distribution of South Carolina Birds. Charleston Museum Ornithological Contribution No. 8. Charleston, SC.

Post, W. and S. A. Gauthreaux, Jr. 1989. Status and Distribution of South Carolina Birds. Contributions from the Charleston Museum. No. 18. Charleston, SC.

## Verification of the First Nest Record of the Swainson's Warbler in North Carolina

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Pearson et al. (1942) stated that J. E. Gould found a Swainson's Warbler (*Limnothlypis swainsonii*) nest with four slightly incubated eggs near Edenton, Chowan County, North Carolina, on 10 May 1906. This was the first breeding record for the state, though other details were unavailable. Jonhnston (1991) confirmed that this nest record was listed in Gould's catalogue, but he did not examine the Gould Collection which is now archived at the Charleston Museum. We have examined this egg set (ChM 1991.13.013), with one slightly cracked egg, and confirmed it is that of a Swainson's Warbler. The eggs measure (in mm) 18.5 x 14.6, 18.7 x 14.1, 18.6 x 14.6, and 19.0 x 14.4.

This verified Swainson's Warbler egg set was the only one of this species

collected by Gould, and one of just four other eggs sets he collected in the northeast coastal plain of NC (also Hertford and Washington counties) from 1906 to 1911. In 1887, Gould had obtained a Swainson's Warbler egg set collected in Georgia by T. D. Perry (see Johnston 1989). Perry, who had collected many other Swainson's Warbler egg sets in Georgia (see Burleigh 1958), may have informed Gould that eggs sets of this species were rare.

H. H. Bailey may have suggested to Gould that he search for a Swainson's Warbler nest in Chowan County, close to Gould's home in southeast Virginia, where the Swainson's Warbler is locally common in the Great Dismal Swamp (see Meanley 1971). Bailey apparently first met Gould in 1906, the year Gould collected his egg set, though the exact timing of their initial acquaintance is unknown (see Johnston 1991). Gould collected the Swainson's Warbler egg set in NC two years earlier than any egg set he collected in Virginia.

The only earlier record of Swainson's Warbler in NC was in 1885 at New Bern, Craven County, where H. H. Brimley collected one bird (Smithwick 1897, Pearson et al. 1942). The location of this bird is unknown (D. Lee, in litt.).

Acknowledgments: We thank D. S. Lee and an anonymous individual for their critical comments on the manuscript.

LITERATURE CITED

Burleigh, T. D. 1958. Georgia Birds. Univ. Oklahoma Press, Norman.

Johnston, D. W. 1989. Joseph Edward Gould - early Georgia oologist. Oriole 54:17–34.

Johnston, D. W. 1991. Joseph Edward Gould (1866–1945). Early Virginia oologist and ornithologist. Raven 62:59–62.

Meanley, B. 1971. Natural history of Swainson's Warbler. North Am. Fauna 69:1–90.

Pearson, T. G., C. S. Brimley, and H. H. Brimley. 1942. Birds of North Carolina. Bynum Printing Co., Raleigh.

Smithwick, J. W. P. 1897. Ornithology of North Carolina: a list of the birds of North Carolina, with notes of each species. North Carolina Agri. Expt. Sta. Bull. 144:193–228.

## Bobolinks Breed in Transylvania County, NC

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At least one pair of Bobolinks (*Dolichonyx oryzivorus*) bred successfully in Transylvania County, NC, in 1994. We first became aware of the presence of late

Bobolinks on 8 June, when we were asked by a local farmer, Ules Bryson, to identify a bird he had seen in one of his hayfields. He described a male Bobolink, and said it had been there about a week. That day, we visited the site, located in the Calvert section of the French Broad River valley west of Brevard. We saw two male and three female Bobolinks in a 4 hectare uncut field. The males appeared to be chasing the females and were singing as they flew.

On subsequent visits we saw as many as three males, but did not see any more females until 25 June, when we saw one with a male. We did not see any food-carrying or other definitive nesting behavior during this time. In fact, the birds were very secretive and an hour's stay usually yielded only one or two brief sightings. On 8 July, however, we saw two Bobolinks sitting side by side on a fence at the edge of the field. Both birds were seen face-on at a distance of about 5 meters.

One of the birds, which we identified as an adult female, was lightly washed with yellow on the front, with light streaking on the breast, heaviest at the sides. There was a darker smudge at the shoulder. The crown was brown with buff stripes, and a dark line extended back from the eye. The back, visible as she bent over to preen, was streaked like that of a sparrow. The bill was stubby and sparrow-like. The overall size was about seven inches.

The other bird, which we identified as a juvenile, was similar to the first but considerably more yellow in color, and with much lighter streaking on the breast and sides. It appeared scruffy compared to the adult. It sat still, wide-eyed and staring, with the "innocent" look so common to young birds. After about five minutes, the adult finished preening and flew away over the field. The young bird hesitated only a half-second before following, and both disappeared into the tall grass.

We stayed an hour more but did not see any further Bobolink activity that day. The next day, however, we did see a male, flying in circles and chirping over the area where the other two had landed the previous day.

Other Bobolink activity in Transylvania County that spring was noted on 22 May. A small flock was observed at a farm only 0.4 km from the Bryson property, on a field trip during the CBC meeting out of Kanuga. Several observers suggested that the birds might be nesting, as it was already late for migrants. Bobolinks continued to be reported from this location through June. After the first field was cut they moved to a second. However this field was mowed on 20 June, foiling them again.

The success of the birds at the Bryson property was due primarily to two factors: the weather, and Ules Bryson's cooperation. His fields would all have been cut by the end of May had rain not intervened. Heavy showers forced him to halt mowing with several fields still unmowed, and it was during this period, at the beginning of June, that the Bobolinks first arrived. It then rained daily for about two more weeks. Meanwhile, we had identified the birds and informed him how rare a breeding record would be. He was very concerned about bird life, and volunteered to let that field alone until the Bobolinks had finished nesting.

Other species we observed regularly while watching for Bobolinks included Green Heron, Eastern Kingbird, Willow Flycatcher, Northern Bobwhite, and Eastern

Meadowlark. The latter two, especially, may have benefitted from the unmowed field. On the day we saw the young Bobolink, we also saw three newly-fledged Meadowlarks, and heard constant Bobwhite calls coming from the grass.

This observation apparently represents a major extension of the Bobolink's breeding range, which previously extended to northwest North Carolina and adjacent Johnson County, TN (Chat 44:11). Individual breeding records were reported for Wilkes County, NC, in 1959 and 1960 (Chat 23:67–68; Chat 24:105) and probable breeding was noted in Ashe County, NC, in 1980 (Chat 44:11). There are numerous reports of individual Bobolinks in northwest NC and northeast TN, which indicate the probability of a small but regular breeding population (David Lee, pers. Comm.). This Transylvania County record, however, is more than 160 km south west of these locations.

If more farmers could be persuaded to postpone haying until grassland birds have finished their nesting cycles, many species might benefit. Even when this is not possible, other small adjustments can help. A tape recording we obtained from Quail Unlimited (RR1, Stendal, IN 47585; $10) makes this point very effectively, and does it from the farmer's point of view. It suggests, for instance, that a change in the height of mowing to leave a 6-inch stubble will allow a farmer to harvest a crop on time without destroying most nests. Many Carolina farmers might make these adjustments if they understood their importance. Organizations like Quail Unlimited or the N. C. Wildlife Resources Commission can provide this information.

The authors wish to thank Lynn Moseley and David Lee for their help in the preparation of this manuscript.

## Black-bellied Whistling Ducks Observed in Colleton County, South Carolina

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On 30 July 1994, Harrigal, Laurie and Floyd observed two Black-bellied Whistling Ducks (*Dendrocygna autumnalis*) at the Donnelley Wildlife Management Area near Green Pond, Colleton Co., South Carolina. The birds were preening and feeding in a waterfowl impoundment where the water level had been lowered for management purposes.

The birds were seen in excellent early morning light from a distance of 50 m for 15 minutes. The birds were photographed by Laurie (Fig. 1). The red-orange bill, red legs, distinct white eye ring, cinnamon back, black belly and large white wing patches were unmistakable. Harrigal had observed the birds in the same location on two separate occasions on the previous day.

Figure 1. Black-bellied Whistling Ducks at Donnelley Wildlife Management Area in Colleton County, SC. Photo by Pete Laurie.

This appears to be the second documented record of Black-bellied Whistling Ducks in South Carolina (Martin 1984). There is always doubt about the origins of vagrant waterfowl especially a colorful tropical species like this Whistling Duck but the recent plethora of extralimital records from as far away as Quebec, Ontario and Iowa (Kaufman 1994) suggest that the South Carolina birds were genuine wandering wild birds. The presence of a tropical depression that several weeks earlier had moved into the Southeast from the Gulf of Mexico and stalled in Georgia may have contributed to these birds being beyond their normal range and reinforced the view of the wild origin of these birds.

## LITERATURE CITED

Kaufman, K. 1994. The Changing Seasons. Amer. Birds 48:264–267.

Martin, E. M. 1984. A 1977 record of a Black-bellied Whistling-Duck from Lee County, S. C. comes to light. Chat 48:14.

## BRIEFS FOR THE FILES

RICKY DAVIS

(All dates Fall 1994)

PACIFIC LOON: Once again the Figure Eight I., NC area hosted this species when two adults and one immature were found in a large (1000+) flock of Common Loons just off the beach on Nov. 12 (Derb Carter). There is still only one well documented record of this species in North Carolina waters!

EARED GREBE: This species was first noted at its usual spot at the Goldsboro, NC Wastewater Treatment Plant on Oct. 2 when nine were present (Eric Dean). Several individuals remained through the fall season on into winter.

HERALD PETREL: Fall reports included one possible bird off Hatteras Aug. 21 (Armas Hill, et al.) and two light phase individuals off Hatteras Oct. 8 (Steve Dinsmore, Brian Patteson, et al.) for one of the latest records ever reported.

CORY'S SHEARWATER: A very good count was the 1806 off Hatteras on Sept. 17 (Brian Patteson, et al.).

MANX SHEARWATER: A very rare report was of one very early off Oregon Inlet, NC on Aug. 21 (Mike Tove, et al.).

BAND-RUMPED STORM-PETREL: An offshore trip off of Oregon Inlet, NC had very good numbers of this species with possibly up to 50 birds on Aug. 21 (Mike Tove, et al.). Much more astounding though was the recovery of a specimen from Tryon, NC on Aug. 21 (Simon Thompson)! The bird's presence in the foothills of the state was explained by it following an intense storm which had earlier come up from the Gulf of Mexico and traveled over the area.

WHITE-TAILED TROPICBIRD: There were three reports off Hatteras, NC this fall with one adult Aug. 8 (A. Hill, et al.), one immature Aug. 13 (Brian Patteson, et al.), and an adult Sept. 25 (Patteson, et al.).

RED-BILLED TROPICBIRD: An immature was found off Hatteras, NC Aug. 13 (Brian Patteson, et al.) for a very rare report - the second of the year (after a July sighting)!

MASKED BOOBY: Another good sighting was the adult Masked found off Hatteras, NC Aug. 20 (Brian Patteson, et al.).

BROWN BOOBY: Reports of this species continued into the fall after the summer sightings! One adult was at Hatteras Inlet Aug. 6 (Maurice Barnhill, J. Tucker) and immatures were found off Hatteras, NC Aug. 15 (Brian Patteson, et al.), Aug. 21 (A. Hill, et al.), Sept. 9 (Patteson), and Sept. 17 (Patteson). It seems that at least four different birds were involved - an amazing season for this species in North Carolina waters.

NORTHERN GANNET: Very early were two subadult Gannets brought in to a Morehead City, NC Wildlife Shelter on Aug. 9 (fide John Fussell).

AMERCAN. WHITE PELICAN: One was present at Pea I., NC from Oct. 8 to at least Nov. 25 as noted by numerous observers.

ANHINGA: A first local record was provided by one at Carolina Sandhills NWR, Chesterfield County, SC Aug. 27 as noted by Robin Carter and Caroline Eastman. Also rare and quite late was one at Oriental, NC Oct. 23 (Adam and Phyllis Martin).

BLACK-CROWNED NIGHT-HERON: Three at Jordan Res., NC Aug. 12 were noteworthy (Doug Shadwick).

YELLOW-CROWNED NIGHT-HERON: A good count for the Carolinas was the six found at Huntington Beach State Park, SC Sept. 26 as noted by Pete Worthington. Also one far inland at Tryon, NC Sept. 10 (Simon Thompson) was documented with photos.

GREAT "WHITE" HERON: The bird present at North Pond, Pea I., NC since July was seen throughout the fall on into the winter (m. ob.).

SNOWY EGRET: Good inland counts were eleven at the Goldsboro, NC Wastewater Treatment Plant Oct. 3 (Eric Dean) and five at L. Crabtree, Wake County, NC Sept. 2 (Doug Shadwick). Also of note was one in the Townville, SC area Sept. 16 (Steve Patterson).

REDDISH EGRET: This species continues to increase in the Carolinas during summer and fall. In North Carolina this fall there were at least four on Core Banks and singles were at Bodie Pond, Cape Hatteras, and Sunset Beach. In South Carolina one was at Inlet Point, two were at Huntington Beach State Park, and an amazing six were at the Yawkey WMA!

ROSEATE SPOONBILL: Always rare in our area, one was reported at Hatteras Inlet, NC Aug. 13 (Paul O'Neill, fide Steve Dinsmore) but was not seen by any others.

WOOD STORK: One immature was slightly out of place at Greenville, NC Aug. 28 as noted by John and Paula Wright. An adult was a surprise seen migrating with an Osprey over Pilot Mt., NC Sept. 19 (Ramona Snavely, et al.)! Also 12 at the Orangeburg Fish Hatchery, SC Aug. 28 were noteworthy (Robin Carter and Caroline Eastman).

TUNDRA SWAN: North Carolina inland reports included nine at Jordan Res. Nov. 7 (Randy Emmitt) and ten near Winston-Salem Nov. 16 (Tom Echols, et al., fide Ramona Snavely). Also one was locally unusual at Sneads Ferry, NC Nov. 19 (Nell Moore).

GREATER WHITE-FRONTED GOOSE: The only report of this species was one at Murphy's I., SC Oct. 30 as noted by David Donmoyer (fide Jack Peachey).

SNOW GOOSE: Inland reports of this species included two blue phase birds at Bennettsville, SC Oct. 27 (Steve Patterson) and one white phase near Kinston, NC Nov. 18 (Bob Holmes).

BRANT: One found at Hatteras Inlet, NC on Sept. 17 (Ned Brinkley) was quite early for a fall arrival. Could it have been a summer lingerer that had escaped detection?

CINNAMON TEAL: A very rare occurrence was the eclipse male found at Huntington Beach State Park, SC on Sept. 9 (Nell Moore, Ann Foster). The bird was photographed and provided about the 8th SC record.

EURASIAN WIGEON: The usual Pea I., NC birds were found as early as Oct. 5 (two, Ricky Davis) and were seen throughout the fall. The peak number reported there was four on Nov. 2 (Rusty Evrets). The Raleigh, NC area also hosted a male near L. Wheeler from Nov. 19 on into the winter (Bob Hader, et al.).

COMMON EIDER: The only report was of a single individual at Huntington Beach State Park, SC on Nov. 20 (Robin Carter, Caroline Eastman, et al.).

COMMON GOLDENEYE: A locally rare occurrence was the lone female near Townville, SC Nov. 27 as noted by Kevin Calhoun.

RED-BREASTED MERGANSER: Two near Brevard Nov. 26 (Betty McIlwain) were locally uncommon.

RUDDY DUCK: Rare late summer reports involved a male at L. Pinehurst, NC Aug. 6 (Kevin Markham) and for the second summer in a row, breeding was observed at Sneads Ferry, NC. A pair spent the summer there and on Sept. 7 a duckling was observed (Jimi and Nell Moore, Jim O'Donnell).

OSPREY: Quite late for an inland site was one found near Goldsboro, NC Nov. 13 (Eric Dean).

MISSISSIPPI KITE: A count of 26 was had near Jackson, SC on Sept. 2 (Carol Eldridge, fide Anne Waters); an especially good count for that late in the season.

BALD EAGLE: For the second year in a row, evidence of nesting in the Greensboro, NC area was observed when two adults were seen carrying nesting material in November (Herb Hendrickson).

ROUGH-LEGGED HAWK: A well-described individual was seen in flight near Camp Lejeune, Onslow Co., NC on Oct. 22 by John Hammond. The bird was on the move and provided one of the earliest fall dates for the state.

GOLDEN EAGLE: Always noteworthy, this species was seen twice with one at Caesar's Head State Park, SC Oct. 8 (Robin Carter, Caroline Eastman) and one over Connestee Falls, NC on Nov. 4 (Dick Thorsell, fide Norma Siebenheller).

MERLIN: In North Carolina, rare inland reports included one at Roan Mountain Sept. 19 (Rick Knight) and one near Chapel Hill Oct. 8 (Chapel Hill Bird Club). Also of note was the good one-day total of 12 migrants at Cape Lookout, NC on Oct. 4 (Steve Dinsmore).

PEREGRINE FALCON: Inland reports of migrants included singles at Tryon, NC Sept. 18 (Simon Thompson), Falls Lake, NC Oct. 2 (Ricky Davis), Durham County, NC Oct. 9 (Bert Fisher), Caesar's Head State Park, SC Oct. 23 (Robin Carter, Caroline Eastman), and the Orangeburg Sod Farm, SC Nov. 25 (Jerry Griggs, fide Robin Carter) which provided a first local record. Also one was slightly early at Bear I., SC Aug. 20 (Robin Carter, Caroline Eastman).

PURPLE GALLINULE: An amazing number for the Carolinas was the 50+ (including chicks) seen in Berkeley County, SC on Aug. 5 by Pete Worthington.

COMMON MOORHEN: An immature found at Lake Osceola, Hendersonville, NC Nov. 3 - 10 (Simon Thompson) was locally uncommon.

AMERICAN COOT: A very early (or summering) individual was seen near Avon, NC Aug. 14 by Susan Barrell.

AMERICAN GOLDEN PLOVER: This species was reported more frequently than usual this fall. From one to two were at North Pond, Pea Island, NC mid-Aug. to mid-Oct (m. ob.), from one to four were at Cape Hatteras in early Sept. (sev. ob.), and a very good count of 11 was at New Drum Inlet, NC Oct. 4 (Steve Dinsmore). Inland reports included the presence of from one to four at the Orangeburg Sod Farm, SC from Sept. 4 to Oct. 22 (Robin Carter, Caroline Eastman, Carolina Bird Club, Pete Worthington, Larry and Carol Eldridge) and two at Falls Lake, NC Oct. 16 (Ricky Davis).

SEMI-PALMATED PLOVER: A first local record for Polk County was provided by one near Tryon, NC Sept. 1 -2 as noted by Simon Thompson.

PIPING PLOVER: Dinsmore had a very respectable 68 Pipings at Portsmouth, NC on Oct. 5. Rare inland sightings were singles at New Bern, NC Aug. 7 (Bob Holmes) and at Falls Lake Sept. 16 (Ricky Davis).

AMERICAN AVOCET: Away from their usual haunts were two at a Horry County, SC turf farm Sept. 9 - 13 (Rick Murray), one at the north end of Ocracoke I., NC Oct. 7 (Steve Dinsmore, Todd Hass), and one at Harker's I., NC Nov. 18 (Wade Fuller).

LESSER YELLOWLEGS: A very good inland count was the 70+ found at Goldsboro, NC Oct. 3 by Eric Dean.

UPLAND SANDPIPER: Fall reports of this species included a peak of 39 at the Orangeburg Sod Farm, SC on Aug. 2 (Randy Grover), one at Lockwood Folly Inlet, NC Aug. 6 (Ricky Davis), 15 in a pasture near Garland, Sampson County, NC Aug. 16 (Eric Bolen, Sam Ennis), four near Goldsboro, NC Aug. 11 - 17 (Eric Dean), two at Sneads Ferry, NC Aug. 17 (Nell Moore), and from one to three at the usual Salvo Campground, NC site during August (m. ob.). The latest date involved one still at the Orangeburg Sod Farm, SC Sept. 24 (Carolina Bird Club).

LONG BILLED CURLEW: The only report received was of one at New Drum Inlet, NC Oct. 5 (Steve Dinsmore).

HUDSONIAN GODWIT: A flock of 10 spent the period Aug. 15 - 21 at North Pond, Pea I., NC as noted by countless observers. Also one was at Cape Hatteras, NC Sept. 3 (Steve Dinsmore, Susan Barrell, Brian Patteson, Todd Hass).

RUDDY TURNSTONE: The only inland report for the fall was of two at Falls Lake, NC Sept. 16 (Ricky Davis).

SANDERLING: Inland birds included one at the Orangeburg Sod Farm, SC Sept. 23 (Lex Glover) and from two to six at Falls Lake, NC Aug. 28 - Sept. 16 (Ricky Davis).

WESTERN SANDPIPER: Noteworthy were the three found at the Orangeburg Sod Farm, SC Aug. 4 by Randy Grover and Van Atkins.

WHITE-RUMPED SANDPIPER: The only inland reports came from Falls Lake, NC where two were there Aug. 28 and three were present Oct. 16 (Ricky Davis).

BAIRD'S SANDPIPER: This rare species was found at Pea I., NC Aug. 8 (Ricky Davis) and Aug. 20 (Will Cook, Julia Shields). One was at Cape Hatteras, NC

Sept. 19 - 24 (Steve Dinsmore, Susan Barrell, Roger McNeill, Phil Crisp, Mack Smith). In South Carolina one was at Huntington Beach State Park Sept. 2 (Steve Patterson) for a very good local report.

CURLEW SANDPIPER: This species was found at the usual spots (all North Carolina) including one at Cape Hatteras Aug. 9 - 17 (m. ob.), Bodie I. pond Aug. 13 (Ricky Davis), Pea I. Aug. 12 (Steve Dinsmore, Susan Barrell), and two at Portsmouth Aug. 26 (Dinsmore).

STILT SANDPIPER: A good inland count of 18 was had at Goldsboro, NC Aug. 24 (Eric Dean).

BUFF-BREASTED SANDPIPER: This species had a good fall migration in the Carolinas during 1994. The farthest inland records involved singles at Landrum, SC Aug. 4 - 5 and near Tryon, NC Aug. 5 - 6 (Simon Thompson). From one to two were at the Orangeburg Sod Farm, SC Aug. 28 (Robin Carter, Caroline Eastman, et al.); a peak of six was there Sept. 4 (Larry and Carol Eldridge, fide Anne Waters); and one was still present there Sept. 24 - 25 (Carolina Bird Club, Simon Thompson). From one to two were at Cape Hatteras, NC Aug. 25 (Suzanne Wrenn, Pat Moore) until at least Sept. 5 (Early Bird Nature Tours). And finally, a rare local occurrence was the individual found at Sneads Ferry, NC Aug. 17 (Nell Moore).

RUFF: This very rare shorebird was found at Pea I., NC Aug. 5 (Ned Brinkley) and Aug. 8 (Ricky Davis); most likely the same individual. Another bird was found there Sept. 26 by Wade Fuller and Bob Holmes. As is so often the case, these birds tend to stay on the move and do not hang around for very long in one place.

WILSON'S PHALAROPE: Unusual inland was the occurrence of four different individuals found at the Goldsboro, NC Wastewater Treatment Plant during the period Aug. 27 - Oct. 16 as noted by Eric Dean. Much more expected was the presence of birds at Pea I., NC where singles were noted from early Aug. to early Sept. (Steve Dinsmore, Susan Barrell, Will Cook, Julia Shields, Ricky Davis). One was also at Cape Hatteras, NC Aug. 25 - Sept. 3 (m. ob.).

RED-NECKED PHALAROPE: Very rare inland was the individual found at Goldsboro, NC Oct. 17 - 18 (Eric Dean). Less unusual but still noteworthy was one at North Pond, Pea I., NC Aug. 27 as noted by Russ Tyndall and Patricia Earnhardt.

LONG-TAILED JAEGER: This fall good numbers were found off of Hatteras, NC when three were found Aug. 13, two Aug. 14, one Aug. 20, and a surprising seven Sept. 17 (Brian Patteson, et al.).

SOUTH POLAR SKUA: The only report involved one bird off Hatteras, NC Aug. 8 (Armas Hill, et al.).

LAUGHING GULL: Inland reports included one at Lake Crabtree, Wake County, NC Sept. 2 (Doug Shadwick), a good count of seven at Goldsboro, NC Oct. 3 (Eric Dean), and one at the Raleigh, NC landfill Nov. 17 (Bob Hader).

SANDWICH "CAYENNE" TERN: An adult of this race of Sandwich Tern was found at Cape Hatteras Sept. 23 (Steve Dinsmore, Todd Hass). Photos have been

circulated and seem to eliminate other possible terns including Elegant Tern. This is about the third record for North Carolina.

ROSEATE TERN: One of the best counts in many years was the seven (6 ad. and 1 imm.) at Cape Hatteras, NC Sept. 2 - 3 as noted by Steve Dinsmore, Susan Barrell, Brian Patteson, and Todd Hass.

BLACK TERN: North Carolina had several inland reports including 35+ at Lake Crabtree, Wake County Aug. 15 (Doug Shadwick), 40+ at Goldsboro Aug. 16 (Eric Dean), 25+ far to the west at Lake Lure Aug. 17 (Jerry Nagel), 20 at the Bethel Sewage Lagoons, Pitt County Aug. 21 (Ricky Davis), and up to 20 at Falls Lake Aug. 27 - 28 (Bob Hader, Paul Chad, Ricky Davis). The best coastal report involved about 460 at Portsmouth on Aug. 26 (Steve Dinsmore).

EURASIAN COLLARED-DOVE: This species was finally found in South Carolina when several individuals were seen in Myrtle Beach in early Sept. (Veronica Pantelidis, Robin Carter, Caroline Eastman). The birds have been seen by many since and it seems that these birds have been present in the area for about two years. The population seems to be growing since up to 30 different birds have been seen recently. In North Carolina the second report was of a bird at a feeder in Buxton Aug. 5 (Ned Brinkley, B. J. Rose) and the third was of a calling individual at Figure Eight I. Aug. 13 (Derb Carter). It seems this species is definitely moving into the Carolinas in full force.

COMMON GROUND-DOVE: A very good count was the 12 at Huntington Beach State Park, SC on Oct. 28 (Nell Moore). Inland where much rarer, two were at the Orangeburg Sod Farm, SC Aug. 28 (Robin Carter, Caroline Eastman, et al.) for a second local record. Also a couple of miles away from this site, three more were found Sept. 24 (Carter, Eastman).

BLACK-BILLED CUCKOO: What may be a record count for the Carolinas was the six found at Maggie Valley, NC Sept. 3 by Lex Glover; who stated that there were major flocks of transients around the area that day. Other reports included singles at Pea I., NC Aug. 13 (Henry Link), near Jacksonboro, SC Sept. 9 (Randy Grover), at Buxton, NC Oct. 1 (Lex Glover, Bert Fisher), and at Pea I. Oct. 2 - 5 (Glover, Fisher, Ricky Davis),

SHORT-EARED OWL: A rare local sighting was of one at Figure Eight I., NC Nov. 5 (Derb Carter).

NORTHERN SAW-WHET OWL: An amazing total was the five Saw-Whets banded by Frank Enders in Halifax, NC during the period of Nov. 12 - 24. This clearly indicates that there are good numbers of these birds migrating into our area, even away from the immediate coast!

RUFOUS HUMMINGBIRD: Adult males were found in Allendale County, SC Oct. 13 (Joe Topper, fide Carroll Rickard), Weddington, NC Oct. 29 (Lex Glover), Lewisville, Forsythe County, NC Oct. 19 - 20 (Connie Beauchamp, fide Ramona Snavely), and near Wilmington, NC mid. Nov. on into the winter (fide Sam Cooper). A sub-adult male was at Simpsonville, SC Nov. 2 - 3 (Pete Worthington). Reports of other Selasphorus and of Archilochus type hummers were numerous, all of female or immature plumages. Just how many will try to

winter remains to be seen.

COMMON "RED-SHAFTED" FLICKER: North Carolina's third sight report of this western race occurred when Ned Brinkley found one on a light pole at Pea I. Oct. 9. The previous records also were from the Outer Banks!

OLIVE-SIDED FLYCATCHER: The only report received of this rare migrant was of an immature bird near Durham, NC Sept. 30 (Will Cook).

YELLOW-BELLIED FLYCATCHER: This species was reported from North Carolina only with individuals being found at Pea I. Aug. 19 (Steve Dinsmore, Ricky Davis), near Chapel Hill Sept. 11 (Will Cook, Julia Shields), and on Roanoke I. Oct. 1 (Dinsmore, Jeff Pippen).

WILLOW FLYCATCHER: One was heard calling in Greenville County, SC Sept. 10 (Pete Worthington). Also a "Traill's" type Empidonax was seen in Santee NWR, SC Oct. 6 (Ricky Davis).

LEAST FLYCATCHER: The only report was of one banded at Charleston, SC Oct. 5 by Will Post.

TYRANNUS SP.: A kingbird with a "yellow belly" was observed flying away by Todd Hass near Chapel Hill, NC Nov. 22. The most likely choice is of course Western, but there's always the possibility of Tropical/Couch's or Cassin's.

WESTERN KINGBIRD: The only reports of this species came from North Carolina with singles at Rodanthe Sept. 27 (Ricky Davis), Portsmouth Oct. 5 (Steve Dinsmore), and Pea I. Nov. 3 (K. Kristofferson). A much rarer report was of the Western found inland at Lake Pinehurst Oct. 23 - 24 by Dick Burk.

SCISSOR-TAILED FLYCATCHER: This season's token Scissor-tail was at Stumpy Point, Dare County, NC Nov. 1 (John Fussell).

NORTHERN ROUGH-WINGED SWALLOW: A late individual was observed in Orange County, NC Oct. 29 as noted by Will Cook, et al.

MARSH WREN: A locally rare occurrence was the bird found in Transylvania County, NC Oct. 14 by Betty McIlwain.

NORTHERN WHEATEAR: North Carolina's third Wheatear was found in the Cape Hatteras Campground Sept. 22 by Marcia Lyons, Diane and Keith Andre, Pat Moore, and Nell Moore. This individual was remarkably tame, allowing fantastic photo opportunities. The bird stayed around until at least Oct. 29, an unbelievable length of stay for a species which normally is gone in a day or so after being found.

THRUSHES: Reports of migrant thrushes were about normal for most of the Carolinas with the exception of the foothills. For example, Simon Thompson in the Tryon area had a very good count of Gray-cheekeds with 7+ during the period Sept. 22 to Oct. 8. He also had a good one-day total of 17+ Swainson's at Chimney Rock Park Oct. 2.

LOGGERHEAD SHRIKE: All reports of this declining species are important, thus of interest was the finding of four different individuals in New Hanover County, NC Nov. 20 (Harry LeGrand, Jeff Pippen), a very good count for southeastern North Carolina. One of these birds was at Fort Fisher Sept. 5 (Nell Moore) and throughout the fall.

WHITE-EYED VIREO: A high elevation (5500') record was of one at Carver's Gap, Roan Mountain, NC-TN Sept. 19 + 23 (Rick Knight).

WARBLING VIREO: Very rare in fall, this species was found near Columbus, NC Oct. 6 by Simon Thompson.

PHILADELPHIA VIREO: Reports included (all from North Carolina) one at Falls Lake Sept. 16 (Ricky Davis), one in Alleghany County Sept. 17 (Will Cook, Doug Shadwick), one on Roanoke I. Sept. 24 (Todd Hass, Brian Patteson), up to four in the Tryon - Chimney Rock Park area Sept. 29 - Oct. 1 (Simon Thompson), and two at Portsmouth Oct. 5 (Steve Dinsmore).

"BREWSTER'S" WARBLER: Always noteworthy, one was found near Asheville, NC Aug. 1 (Len and Esther Pardue) and another was near Chapel Hill, NC Sept. 5 (Len Pardue).

GOLDEN-WINGED WARBLER: This species is normally hard to find in the eastern part of the Carolinas in fall. Thus of interest were the two in Durham, NC Sept. 8 (Will Cook, Jeff Pippen), one in Marion County, SC Sept. 10 (Steve Patterson), one in Richlands, NC Sept. 19 (Nell Moore), one at Pettigrew State Park, NC Oct. 2 (Lex Glover, Bert Fisher), and one at Cape Lookout, NC Oct. 4 (Steve Dinsmore).

TENNESSEE WARBLER: This species migrates through the western areas in much larger numbers than along the coast, thus of interest were the singles at Corolla, NC Sept. 24 (Steve Dinsmore, Susan Barrell, Brian Patteson, Todd Hass), Pea I., NC (Dinsmore, Jeff Pippen, Lex Glover, Bert Fisher), and Mars Bluff, SC Oct. 21 (Steve Patterson).

NASHVILLE WARBLER: Reports of this species were up with sightings all across the Carolinas. Highlights included at least three different birds in the Durham, NC area Sept 8 - Oct. 10 (Jeff Pippen, Will Cook); singles at Asheville, NC Sept. 12 (Gail Whitehurst) and Tryon, NC Sept. 28 and Oct. 4 (Simon Thompson); one at Pea I., NC Sept. 19 and Oct. 1 (Steve Dinsmore); one at Charleston, SC Sept. 28 (Randy Grover); and the banding of two in the Charleston, SC area Sept. 19 and 26 (Will Post) provided some of the very few confirmed records for the species in the state.

ORANGE-CROWNED WARBLER: A locally uncommon occurrence was provided by an individual at Landrum, SC Oct. 30 (Simon Thompson).

PRAIRIE WARBLER: A high elevation (5500') record was of one at Carver's Gap, Roan Mountain, NC-TN Sept. 10 (Rick Knight). Also one was late, but not unexpected, at Lake Mattamuskeet, NC Nov. 27 (Eric Dean).

BLACKPOLL WARBLER: This species is a rare fall migrant in South Carolina, thus of interest was the individual banded at Charleston Oct. 4 (Will Post).

CERULEAN WARBLER: Reports of this always exciting species included a male at Raleigh, NC Aug. 19 (Bob Hader), a male at Falls Lake, NC Aug. 28 (Ricky Davis), a female banded at Charleston, SC Aug. 29 (Will Post), and a male seen at Folly Beach, SC Sept. 30 (Dennis and Donna Forsythe).

WORM-EATING WARBLER: A late individual was found at Chimney Rock Park, NC Oct. 2 by Simon Thompson.

SWAINSON'S WARBLER: An unexpected and late migrant was seen at Folly Beach, SC Sept. 23 by Dennis and Donna Forsythe.

CONNECTICUT WARBLER: The only report received was of an adult male at Eno R. State Park, Durham County, NC Sept. 3 (Edith Tatum, fide Will Cook).

MOURNING WARBLER: This is normally one of the rarest warblers in the Carolinas. This fall there were an amazing five reports! In South Carolina, a female was banded at Charleston Aug. 24 (Will Post) for the 5th confirmed state record. In North Carolina, sightings included singles at Pea I. Sept. 3 (Early Bird Nature Tours), Alleghany County Sept. 17 (Will Cook, Doug Shadwick), Pea I. Sept. 24 (Ned Brinkley), and a very late bird near Asheville Oct. 14 (Len and Esther Pardue).

WILSON'S WARBLER: Always noteworthy, migrants of this species were found at Maggie Valley, NC Sept. 5 (Lex Glover), Folly Beach, SC Sept. 23 (Dennis and Donna Forsythe), Cape Lookout, NC Oct. 4 (Steve Dinsmore), and Pea I., NC Oct. 8 (Jeff Pippen, Pat Moore, et al.).

YELLOW-BREASTED CHAT: Two were locally uncommon and late in the Tryon - Chimney Rock Park, NC area in early Oct. (Simon Thompson).

WESTERN TANAGER: A male returned to a feeder in Wilmington, NC Oct. 31 for the third year in a row (Kitty Kosh)!

ROSE-BREASTED GROSBEAK: An example of the good numbers of migrant passerines that can sometimes be found in the mountains was the 80+ Grosbeaks seen at Carver's Gap, Roan Mountain, NC-TN Sept. 23 (Rick Knight).

BLUE GROSBEAK: A late individual was at Fort Fisher, NC Nov. 20 as seen by Jeff Pippen and Harry LeGrand.

DICKCISSEL: Reports included one at Pea I., NC Sept. 10 (Russ Tyndall, Patricia Earnhardt), four at Pea I. Sept. 27 and Oct. 5 (Ricky Davis), one at Roanoke I., NC Oct. 1 (Steve Dinsmore, Jeff Pippen), and a male banded at Charleston, SC Nov. 9 (Will Post) for a very rare coastal SC occurrence. Also a male and immature were present near Landrum, SC Aug. 4 - Sept. 3 (Simon Thompson).

CLAY-COLORED SPARROW: Fall reports (all coastal) included singles at Wilmington, NC Sept. 14 (Sam Cooper, Kevin Markham), Roanoke I., NC Sept. 27 (Ricky Davis), Bodie I., NC Oct. 1 (Steve Dinsmore, Jeff Pippen, Lex Glover, Bert Fisher), Pea I., NC Oct. 2 (Lex Glover, Bert Fisher), Pea I. Oct. 5 (Ricky Davis), and Mt. Pleasant, SC Oct. 16 (Dennis and Donna Forsythe). Also of note, singles were banded at Charleston, SC Oct. 20 and Nov. 8 (Will Post).

LARK SPARROW: Coastal reports involved one at Yawkey Wildlife Center, Georgetown County, SC Aug. 25 (Lex Glover), one at Pea I., NC Sept. 24 (Bob Holmes), and one at Mt. Pleasant, SC Sept. 30 (Dennis and Donna Forsythe) and Oct. 2 (Randy Grover). Inland, one was found at the Orangeburg Sod Farm, SC Sept. 4 (Robin Carter, Caroline Eastman) for a first local record.

HENSLOW'S SPARROW: A rare report was of the individual banded at Charleston, SC Oct. 26 by Will Post.

LINCOLN'S SPARROW: Reports of this species continue to increase, no doubt due to increased observer effort and knowledge of where to look for them. Two of the more noteworthy records were the singles found near Tryon, NC Nov. 17 (Simon Thompson) and near Chapel Hill, NC Nov. 19 (Haven Wiley).

LAPLAND LONGSPUR: The only report was of a male at the Orangeburg Sod Farm, SC Nov. 6 (Robin Carter, Caroline Eastman).

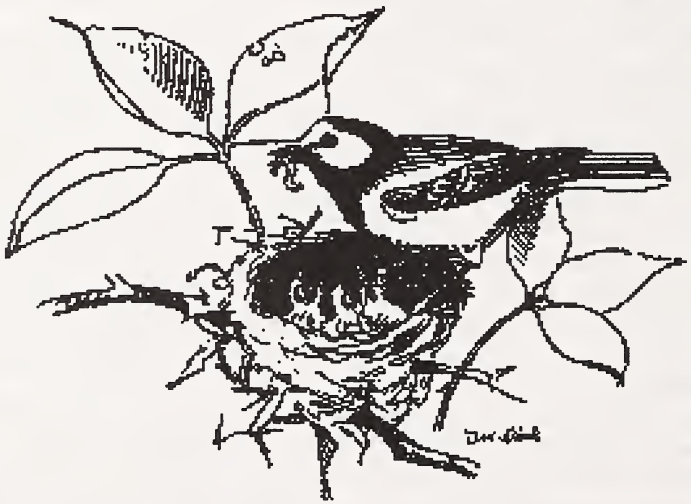
SNOW BUNTING: This species was found only on North Carolina's Outer Banks with singles at Pea I. Nov. 11 & 12 (Will Cook, Jeff Pippen, Susan Barrell).

YELLOW-HEADED BLACKBIRD: A first local record was provided by an immature male at the Orangeburg Sod Farm, SC Aug. 28 (Robin Carter, Caroline Eastman, et al.).

PURPLE FINCH: The four Purples found at Bodie I., NC Nov. 22 (C. H. Gambill) must have been lost since there were not any others reported for the fall period. It looks like it will be a definite off-year for winter finches!

RED CROSSBILL: The only report was from the usual Mt. Mitchell, NC spot where one was seen Sept. 7 (Simon Thompson).

Summer reports (June through July, 1995) for Briefs for the Files should be sent the the "Briefs" editor (for address see front inside cover) by August 20, 1995.



## BOOK REVIEWS

### BIRD LIFE OF NORTH CAROLINA'S SHINING ROCK WILDERNESS

Marcus B. Simpson, Jr. Occasional Papers of the North Carolina Biological Survey and the North Carolina State Museum of Natural Sciences. 1994-1. Paper. 32 pp. $5.00.

The Shining Rock Wilderness, located about 25 miles southwest of Asheville, NC was once the most extensive stand of spruce-fir forests in the southern Appalachians. During the first quarter of this century it was extensively logged and then burned in a series of fires. It was established as a wilderness tract in 1964 and is the subject of Mark Simpson's latest contribution to the knowledge of birds in the mountainous region of North Carolina.

Given the extensive changes to the plant communities and the apparent damage to the soils caused by the fires, it is not surprising that Simpson has documented a number of substantial changes in the composition of the bird communities in the wilderness area compared with nearby areas such as the Great Smoky Mountains, Plott Balsam Mountains, Unicoi Mountains, or Grandfather Mountain. Most obvious is the great reduction of breeding populations of species normally associated with mature spruce-fir forests such as Black-capped Chickadees, Olive-sided Flycatchers, and Northern Saw-whet Owls. Similar reductions can be seen in populations of Brown Creeper, Golden-crowned Kinglet, Red-breasted Nuthatch and Blackburnian Warbler. In contrast, other populations more closely associated with sub-climax vegetative communities or understories, such as Winter Wren, Gray Catbird, Black-throated Blue Warbler, Canada Warbler, Rufous-sided Towhee, Veery, Solitary Vireo, American Robin, Cedar Waxwing and Dark-eyed Junco are maintaining or even increasing in numbers. Finally, the birds of the "edges" or early successional stages, such as Common Yellowthroat, Field Sparrow, Song Sparrow, Indigo Bunting and Brown Thrasher are doing very well in the Shining Rock area compared with other areas of high elevation in the southern Blue Ridge Mountains.

While most serious bird watchers will not be surprised that changes in plant communities seem to cause changes in the abundance of bird communities, what may be surprising is the length of time over which such effects can be detected. The area has been a protected Wilderness Area for thirty years, and the logging and fires have not occurred for nearly seventy years, but the former natural communities have not yet been reestablished. For those with even a passing interest in the birds of the mountains of North and South Carolina and any interest at all in issues of conservation, I recommend this publication as "must" reading.—H. T. Hendrickson

## THE MISSISSIPPI KITE

Eric G. Bolen and Dan Flores. 1993. University of Texas Press, Austin. Hardback. 115 pp. With appendices. Price not listed

Eric Bolen, Dean of the Graduate School at UNC-Wilmington, and Dan Flores, Hammond Professor of Western History at the University of Montana, have teamed up to write a marvelous little monograph on what I consider to be one of the most lovely of the birds of prey, the Mississippi Kite. Lest the word "monograph" scare you off, I assure you that this is not a weighty tome filled with scientific jargon, but instead a simple, but accurate presentation of most of what is known (and not known) about this attractive little raptor.

The book consists of five chapters dealing directly with the Mississippi Kite and one that focuses on conservation and management. There are three appendixes that cover common and scientific names of other organisms mentioned in the text, the dimorphism index and a history of sightings of Mississippi Kites in the last decade. There is also an intelligent list of suggested references for additional reading.

The book describes the discovery of the species (which turns out to have its own interesting scientific wrinkles) and the spread of the species range as a response to human alteration of habitats over the years. Information on its breeding range, migration, breeding, young raising, and food habits are presented in a way that most people interested in birds will find easily readable. The only factual error that I encountered is a statement on page twelve that suggests that the falcons are usually included within the family Accipitridae with the kites, hawks and eagles; whereas most ornithologists place the falcons in a separate family, Falconidae.

I believe most readers will find the chapter on conservation and management particularly informative. While it is less focused on Mississippi Kites than the earlier chapters are, it does deal with the often misguided interactions between humans and birds of prey in a most insightful way and will help to provide a perspective within which to view the nature of the world inhabited by both Mississippi Kites and ourselves. — H. T. Hendrickson

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# The Chat

(USPS 101-020)

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**Quarterly Bulletin of Carolina Bird Club, Inc.**
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# The Chat

Vol. 59 FALL 1995 No. 4

Quarterly Bulletin of Carolina Bird Club, Inc.
The Ornithological Society of the Carolinas

# THE CHAT

VOL. 59 (USPS 101-020) FALL 1995 NO. 4
Published by the Carolina Bird Club, Inc.

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THE CHAT (USPS 101-020) is published quarterly for $12.00 by the Carolina Bird Club, Inc., with headquarters at the North Carolina State Museum of Natural Sciences, 102 N. Salisbury Street, Raleigh, NC 27603. Second-class postage paid at Raleigh, NC.
POSTMASTER: Send address changes to Carolina Bird Club, THE CHAT, P. O. Box 29555, Raleigh, NC 27626-0555.

PAGE CHARGES: Authors who have funds available for page charges are requested to remit same at the rate of $40.00 per page. CBC Headquarters will provide statements required for your business records.

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# Marine Birds off the Coast of North Carolina

David S. Lee

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## ABSTRACT

Records of 71 species of sea birds occurring along and off the North Carolina coast are summarized from published literature sources and from fifteen years (1975-1989) of offshore observations. At least 15 species of birds not previously established as occurring off North Carolina were documented with specimens or photographs during this study, and an additional 7 have been reported based on sightings.

The relatively rich foraging grounds off the Outer Banks of North Carolina account for such a diversity of species of marine birds that assigning the status of accidental or vagrant to even the rarer species might not be appropriate. The local marine micro-environments, are highly variable and account for the area's ability to provide a large species diversity. Seabirds are often simultaneously represented by temperate, boreal, and subtropical species all within a small geographical area. During the spring and fall, migrant species also contribute to the diversity. Although the Hatteras offshore area does not have the predictable large biomass of the Grand Banks during the summer months, it has the largest documented species diversity of pelagic seabirds (Lee 1986) and marine mammals (see Lee et al. 1982) in the western North Atlantic.

The distribution of seabirds in North Carolina's offshore waters is neither even nor random. Clear preferences for certain zones and seasons exist and are discussed in the individual species accounts.

## INTRODUCTION

For fifteen years, the North Carolina State Museum intensively studied marine birds off the northern North Carolina coast. These studies have revealed that the most diverse assemblage of seabirds anywhere in the North Atlantic occurs off this area. Although the diversity partly reflects local field work, the latitudinal position of North Carolina and its location in relation to the Gulf Stream, Labrador Current, and the edge of the continental shelf contribute to the variety of seabirds in the area. The local marine micro-environment is highly variable as a result of interaction of wind current, surface salinity, water temperature, water depth, and season. The currents and variable micro-environment combine to produce a rich foraging ground which accounts for the species diversity.

So many species rely on the productivity of North Carolina offshore waters that even the rarer species may not be truly "accidental." Many represent birds from extremely small populations, some only by a few thousand pairs in the North Atlantic. Although the relatively rich diversity of species is offset by comparatively low densities, many of the tropical and sub-tropical species normally live at low densities (1.5 to 12.2 birds/km$^2$). The seemingly limited local abundance of these species does not diminish the significance of North Carolina's offshore waters for the birds. For several species, North Carolina waters represent the only area where they have been regularly encountered away from nesting areas.

The Hatteras area has long been regarded as a biological "Mason-Dixon Line" between boreal and tropical maritime elements. The state is at a latitude usually associated with temperate seas; however, boreal and tropical species may follow or follow prey items transported by oceanic currents to North Carolina's offshore waters. Thus, the seabirds are often simultaneously represented by temperate, boreal, and subtropical species all within a relatively small geographical area. During the spring and fall, migrant species also contribute to the diversity; but, the offshore area is, for the most part, unoccupied and unexploited by locally nesting seabirds. It is clear that most of the birds found off the state's coast are not geographically or seasonally distributed randomly; but, the identification of the specific factors responsible for local distributions is difficult. Hopefully, the ecological patterns suggested here will help others clarify the micro-distributional factors governing marine bird distribution.

The accessibility of the offshore Hatteras area makes it a practical study site, and the combination of marine factors discussed above makes it a fortunate one. Since the North Carolina State Museum's research began, various publications have reported the museum's findings. An overview of the study and a summary of the first 2-3 years of field work was provided by Lee and Booth (1979) in a paper on the seasonal distribution of offshore and pelagic birds. During the course of this study, over 20 species of birds were discovered that were unknown or thought to occur only rarely in North Carolina, the southeastern United States, or the western North Atlantic (Lee 1976; Lee 1979; Lee, et al. 1981; Lee and Platania 1979; Lee and Rowlett 1979; and Lee 1986a). Several detailed papers on the biology, natural history and phenology of seabirds have appeared and several studies on the life histories of specific species are in preparation. Such reports concern petrels and storm-petrels in North Carolina (Lee 1984) gannets and boobies in the Carolina's and Georgia (Lee and Haney 1984), the occurrence of Black-capped Petrels (Lee 1976), tropicbirds (Lee and Irvin 1983),Arctic Terns (Lee and Cardiff 1993) and Manx Shearwater (Lee 1995), and preliminary studies document mercury levels in organs and feathers of pelagic and inshore seabirds (Whaling et. al. 1980; Whaling and Olson 1981). A detailed analysis, currently in manuscript form, shows some interesting trends in mercury ingestion by local birds. In addition, a study on ingestion of plastics by North Carolina seabirds (Moser and Lee 1989) using information from this same series of birds has been completed. A study on the body temperatures of actively foraging seabirds was also published (Platania, Grant, and Lee 1981).

Two graduate students earned master degrees using materials collected during these offshore trips (Mobley 1980, 1981; Mobley and Miller 1982; and Brown 1980).

Starting in 1985, the Department of the Navy provided funds for the museum to study and monitor relatively shallow (10-20 fathoms) shelf waters in the Virginia Capes area, north and inshore of our principal study site. Information obtained from these studies has greatly complemented previous work on the general zonal distribution of marine birds as it relates to currents, upwellings and other factors governing surface productivity.

Early in this study, I determined that a minimum of 10 survey trips were needed to obtain a reasonable picture of the seasonal fauna (see methods). This goal was difficult to meet. One of the problems with offshore observations, in addition to the

unpredictable nature of seabirds, is scheduling trips in advance. Hayden (1975) pointed out that mid-Atlantic coastal wave climates have increased in duration and frequency in the last three decades. His data indicate that the greatest monthly frequencies of storms (waves greater than 5 feet at Cape Hatteras, North Carolina) now occur during months when bird diversity is high (the migration months of October and April) and at the time of year for which our knowledge is the least complete (December through April). In contrast, storm frequency is lowest from June through September, when the summer resident offshore avifauna is most stable and when biomass is small.

## METHODS AND OBJECTIVES

The primary objective of the research has been seasonal inventories; however, the zonal distribution of all species as it relates to season, water depth, and water temperature has also been recorded. Because our studies were collection-oriented, much information on common species such as taxonomic variations, food, molt, age weight, sex ratios, parasites, body temperature, and mercury loads is available. Specimen data are currently being prepared for publication. In the past, most detailed studies of marine birds have been conducted on the breeding grounds, and little information is available concerning their biology while at sea. The studies were focused on the outer Continental Shelf and slope, and in the Gulf Stream and inshore marine birds such as grebes and sea ducks are not even discussed in this report. For groups such as gulls and terns where some species are pelagic and others are confined to coastal zones, the pelagic birds are discussed in detail and the inshore species are mentioned in annotated lists. Lee and Booth (1979) discussed in more detail the rational for species inclusion.

One day transects through as many marine zones as possible were run from the Outer Banks of North Carolina.Lee and Socci (1989) showed locations of LORAN readings from these trips by month. These transects were conducted from chartered fishing boats that departed from Oregon Inlet or Hatteras Inlet. Shallow inshore waters, the edge of the continental shelf, and deep waters were surveyed, including the Gulf Stream and its inner edge. Areas of bird concentrations were identified and recorded and species composition was noted. Often, small samples of birds were collected with shotguns. Birds were frozen and processed later at the museum. Water temperature, LORAN readings and sea conditions were recorded regularly, as well as when any unusual observations were made. Although day length varies considerably the number of hours spent surveying was similar for all seasons. The number of observers per trip varied, but an increase in number of trip participants did not result in an increase in the number of birds tallied.

Although there have been many suggestions for methods of estimating, counting, and quantifying the numbers of birds encountered at sea (e.g. Powers 1982), off North Carolina, densities of birds are such that it is usually possible to count every individual, or at least to make fairly accurate estimates of flock size. Often, densities are so low that counting birds only during pre-established time blocks and only above pre-determined areas in relation to the position of the boat, would provide extremely limited sampling, miss many species altogether, and because of the concentrations of birds over current edges, feeding fish schools, etc., would provide a biased sample. Therefore, every bird that was seen and identified was counted. Such sampling provides

relatively consistent seasonal comparative information, but I recognize that larger high-flying birds can be seen at greater distances than smaller low-flying species. I have made no attempt here to correct for this or other sampling factors. Comparative information on numbers within a given species (or species groups such as storm-petrels) is more consistent than it is for comparing total numbers between species. Likewise, tallies from survey trips with rough seas, rain or other unfavorable factors are not as reliable as those from calm clear days (see discussion by Rowlett 1980). I do not believe that comparisons between our surveys and those done off other states are possible based on the information presented here. Variations in boat speeds, hours surveyed in each zone, and other factors would need to be considered prior to detailed comparisons. Within the parameters of this study, however, I believe results of different aspects and seasons of this study are comparable.

Numbers presented in this report are of actual counts or, for large aggregations of birds, are minimal estimates. Identifications were normally to species and information such as flocks of "white *Sterna*" are not included here except as total number of birds observed. We were much more critical in our identification of rarer species, and occasionally collected individuals to confirm such identifications. Seven species discussed in this report that apparently occur off North Carolina, have not had their identification confirmed by photographs or specimen. This makes it inadvisable to place them on the official list of state birds but most if not all occur in the states offshore waters. Three, at least, have been confirmed in adjacent states (Yellow-nosed Albatross [Va], Little Shearwater [SC], and Ivory Gull [Potomac River] and two others have been sighted elsewhere in the southeast (Black-browed Albatross [Fla], Soft-plumaged Petrel [Ga]). Sightings of two species, the Bermuda Petrel and the Cape Petrel, are less certain (see remarks in individual species accounts). Except for the Black-browed Albatross, most North Carolina records of these birds prior to 1990 are ones first obtained during these studies.

We have now completed 231 offshore trips mostly in the spring, summer and fall (see Table 1). Variability in seasonal sampling resulted from availability of boats, weather patterns, and because our funding largely stipulated offshore summer data collections. We found extreme variability in day-to-day and perhaps year to year bird concentrations and demonstrated that concentrations are related to variations in food resources. Thus, many trips are needed during each calendar period and over an extended period of time to illustrate normal variation in patterns of distribution and zones of occurrence. Based on results of this study I believed that at least 10 trips per month is the minimum sample size necessary to evaluate the normal range of variation. This sample size was obtained for all months except January, February, and March. However, analysis of monthly diversity compared to survey effort show all but the rare species to be documented in the first few offshore trips.

Values in figures illustrating seasonal distribution of specific birds were calculated using the average number of individuals seen per trip by two week intervals. This helps averaging variations in the number of individuals of a species seen on a given date. The information obtained in shallow shelf waters is not included in the figures presented with species accounts. Inclusion of surveys conducted on dates when only shelf waters were surveyed greatly biased the patterns illustrated. This is because of the

large number of days spent on these surveys (mostly during June, July, and August) and the extremely low total number of birds encountered. On the other hand, for monthly summaries and information on zonal distribution all records are included.

Table 1. Number of one-day offshore surveys off North Carolina (1975-1989) by month and half month periods, with average number of individual birds and total number of species recorded.

| Month | # of Offshore Trips (day 1-15/day 16-end) | Average # Birds Recorded Per Trip | Total # Species Recorded |
|---|---|---|---|
| January | 8 (1/7) | 1538 | 16 |
| February | 7 (2/5) | 2299 | 18 |
| March | 6 (3/3) | 6721 | 18 |
| April | 22 (6/16) | 411 | 34 |
| May | 16 (5/11) | 267 | 29 |
| June | 29 (9/20) | 240 | 34 |
| July | 33 (14/19) | 426 | 26 |
| August | 47 (25/22) | 471 | 30 |
| September | 27 (13/14) | 286 | 26 |
| October | 14 (9/5) | 241 | 22 |
| November | 10 (6/4) | 325 | 27 |
| December | 12 (4/8) | 1122 | 22 |
| Total # Trips | 231 | Average # Birds Per Trip 1201 | Average # of Species 25.16 |

Thirteen summer (June-August) trips were analyzed for zonal distribution of marine birds as they relate to water depth. The summer period was chosen because offshore sea bird populations are most stable at this time. All trips chosen for this analysis departed from Oregon Inlet, NC. All records of seabirds (N = 5,316) dates, times of observations, LORAN reading, number of individuals observed, water depths and water temperature for these were entered into a dBase III program. For analysis of seasonal faunal composition total numbers of all species of birds encountered per month were entered on Macintosh Plus computer using a Microsoft Excel program. This aspect of the study appeared in Lee (1986) and Lee and Socci (1989).

Other major sources of information and abbreviations used in the text are: A.B. = American Birds; Atl. Nat. = Atlantic Naturalist; B.N.C. = Birds of North Carolina; Chat = The Chat; N.C.S.M. = North Carolina State Museum; and U.S.N.M. = United States National Museum. An asterisk (*) indicates a N.C.S.M. specimen record. Observations, record dates, and statements that lack literature citations are from my personal records. No reports published after 31 December 1994 are included, but articles on specific species are included through September 1995.

All species of seabirds known or for which there are unconfirmed reports from the state's offshore waters are discussed. Appendix A summarizes the criteria for each

species included in this study. Information summarizing local status, and season and zone of occurrence is provided for the more common species. Most species accounts include remarks relating to local biology. Accounts for marine birds only rarely encountered offshore are presented in less detail.

The primary purpose of this publication is to provide in a single document an overview of a 15 year survey of the marine birds off the outer continental shelf area near Cape Hatteras North Carolina. While the information presented here is more than preliminary it is not inclusive. Although the field work is essentially complete most aspects of this study presently remain undeveloped.

I should point out that this manuscript was essentially completed by mid 1989. I have attempted to bring it up to date by adding references to studies published since that time and including the recent observations of birds that expand our local knowledge on various species. Nonetheless, this current version of the manuscript is a patchwark and certainly some relevant information was overlooked.

## SPECIES ACCOUNTS

### Common Loon (*Gavia immer*)

Status: Common migrant and winter resident.

Typical Season of Occurrence: November through April. Some migration is still underway in early May, and a few fall migrants are present by mid-October. Although records exist for every month for North Carolina, no birds have been observed at sea between June and late October (Fig. 1).

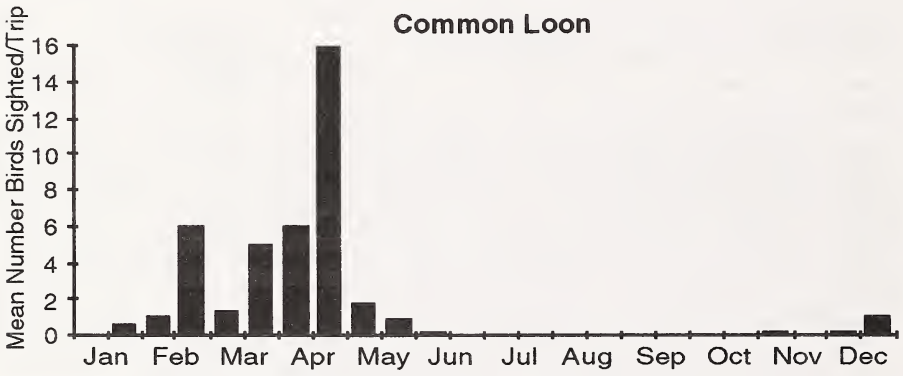


Fig. 1. Seasonal abundance of Common Loon in half month increments.

Maximum Counts: Over 73 were seen offshore on 17 April 1989.

Zone of Occurrence: Most Common Loons frequent waters inshore of the 20 fathom contour, but small numbers winter far out to sea. Haney (1990) estimated up to 20,000 individuals wintering in shelf waters between 29° and 35°N latitude. Most were in waters 0-19 meters in depth. Many inland records of migrants are also available for North Carolina.

Remarks: Lee (1987a) noted that Common Loons which were found offshore of

N.C. were normally not associated with current edges, schools of surface-feeding fish, or other seabirds. However, on 22 January 1986, three solitary Common Loons were found along a tide line in which large mats of *Sargassum* had accumulated. This tide line was more than 9 miles (15 km) in length and followed a contour of approximately 600 to 700 fathoms. Two loons were also found feeding in water 200 to 300 fathoms deep on 14 February 1987. These two birds were associated with other seabirds that were foraging among schools of False Albacore (*Euthynnus allelleratus*) along a small current edge. The association with current edges may indicate that loons, like other marine birds, are attracted by the potential of prey at marine fronts. (Haney and McGillivary [1985b] provided evidence for the distribution of marine birds along these fronts and explained their potential for increased productivity near the ocean's surface.)

The Common Loons encountered in areas of overlapping currents probably were foraging in the rich upper levels of the mixing waters rather than on the floor of the ocean. Dives by Common Loons to depths of 180 to 200 feet have been reported (Schorger 1947), but it is certain that Common Loons do not feed near or on the bottom of water 500 fathoms (3000 feet) deep (Lee 1987).

Other Loons

As far as is known in the southeast only the Common Loon winters at sea and is an epipelagic migrant. There is only one other species of loon that occurs regularly in the state and one other which has been seen on two occasions. Each is discussed briefly.

Red-throated Loon, (*Gavia stellata*.) This loon is a common migrant and regular winter resident along coastal North Carolina. Red-throated Loons rarely occur inland and we have no records of birds at sea. They are most common around inlets and in sounds. The species is usually found from late October through mid-May, but occasional birds may linger through the summer (late May, June, July, August).

Pacific Loon, (*Gavia pacifica*). There are several reports of this Pacific species from North Carolina (15 May 1987, Tove 1989 and 17 February 1974, Am. Birds 28:626-628, 24 March 1993 and 30 April 1993, Chat 58:59). Additional records are available for the southeastern United States including a specimen from just above the North Carolina-Virginia state line (University of Michigan, R. Storer per. comm.).

Albatrosses (*Diomedea* sp.)

Status: Rare vagrants. Both the Yellow-nosed Albatross, *D. chlororhynchos*, and the Black-browed Albatross, *D. melanophris*, have been reported but the latter has not been confirmed in the North Atlantic (McDaniel 1973).

Typical Season of Occurrence: The vagrant status and problems of identification prevent establishment of a typical season of occurrence. Two of the birds seen in North Carolina waters, an adult on April 17, 1978 (Lee and Booth 1979) and an immature reported on December 22, 1985 (Lee 1987) were probably Yellow-nosed Albatrosses. There is an August record of Black-browed Albatrosses off Morehead City (Dumont 1973).

Zone of Occurrence: All North Carolina records have been far at sea (200 fathoms,

[Lee 1987b]), but there are records from sounds and beach fronts in other parts of the southeast.

Remarks: The North Carolina sightings are not adequate for specific identification, and records for neither species have been accepted by the state's bird record committee. Observations of the Yellow-nosed Albatross are available in neighboring states and the southeast (Virginia, Am. Birds 34:260, 36:162; Florida, Aud. Field Notes 12:405; Louisiana, Am. Birds 24:615; and Texas, Am. Birds 26:875, 31:197). An injured Yellow-nosed Albatross was found on Key Largo, Monroe County, Florida in late May 1992 (Am. Birds 46:413). This is the first specimen record from North America. In addition to the single North Carolina report of the Black-browed Albatross (DuMont 1973), there is a Florida sighting (Am. Birds 29:44).

Northern Fulmar (*Fulmarus glacialis*)

Status: Common though irregular visitor off Cape Hatteras and northward. Uncommon south of Cape Hatteras.

Typical Season of Occurrence: Maximum numbers are found in March and the species is often common in April and late October (Fig. 2). They are seen sporadically in most other months although none has been sighted in August or September (Lee 1986a).

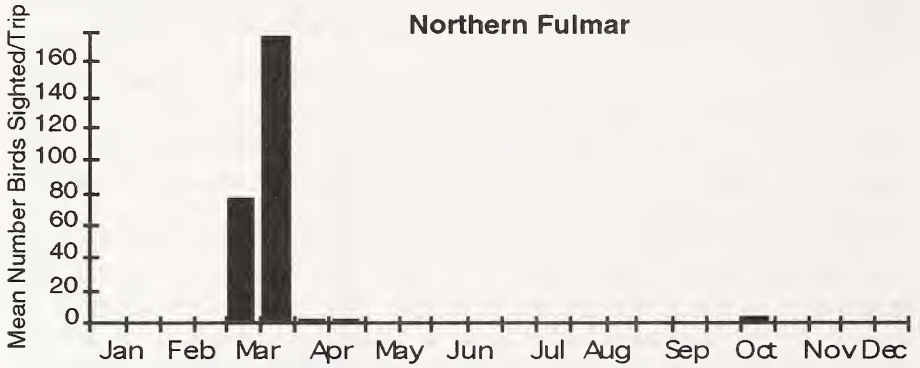

Fig. 2. Seasonal abundance of Northern Fulmar in half month increments.

Maximum Counts: 227 individuals were seen on 26 March 1981.

Zone of Occurrence: Fulmars are usually found on or near the edge of the Gulf Stream or other major marine fronts where upwellings and current edges concentrate food.

Remarks: Fulmars were unknown as far south as North Carolina prior to 1979 (Lee and Rowlett 1979). Since then, they have increased both in numbers and regularity of occurrence (Lee 1986a). Fisher (1952) suggested that the expansion of the range of Northern Fulmars at sea into the northeast Atlantic during the last two centuries could be attributed to the growth of commercial fishing and whaling industries. Wynne-Edwards (1962) disagreed with Fisher and suggested that the expansion resulted from the appearance of a new genotype that was capable of nesting

in lower latitudes in small, scattered colonies. Salomonsen (1965) proposed that recent oceanic temperature changes may relate to current fulmar distribution in the eastern and western North Atlantic. Similarly, Brown (1970) stated that feeding distribution was closely linked with cool water, but not fishing activity. Although no explanation is completely satisfactory, there is no doubt that the Atlantic population of Northern Fulmars has expanded south. Counts of fulmars on the Georges Bank off Massachusetts have reached up to 3,000 birds in a single day (Am. Birds 31:304), yet only two decades ago, the species was scarce south of Canada.

Cape Petrel [also known as Cape Pigeon] (*Daption capense*)

Status: A possible rare vagrant. The single North Carolina sight record (Lee 1986b) is only the second reported occurrence for the western North Atlantic. Lacking specimens, this species is not recognized on the official list of North Carolina birds. The A.O.U. (1983) does not recognize any records from the Northern Hemisphere as valid.

Typical Season of Occurrence: The date of the only record is 26 July 1985.

Zone of Occurrence: The record is from 200 fathoms.

Remarks: The only other record of the Cape Petrel in eastern North America is of a single bird collected in June of 1873 at Harpswell, Cumberland County, Maine (Norton 1922). Although there has been some controversy regarding this record, it appears to be valid (see Forbush 1929). Several other Northern Hemisphere sightings have been made off the Pacific coasts of Mexico and California (A.O.U. 1983). Cape Petrels have been reported off the European coast, at least five of these records are fairly well substantiated (Cramp and Simmons 1977). Nevertheless, most records from the northern hemisphere have been treated as suspect by some authors because of the possibility of intentional transport and release by sailors (Cramp and Simmons 1977). Lee (1993), for example, demonstrated that the pre-1853 specimen record of a Cape Petrel reported to be from off Monterey, California was not valid. In that study the validity of the Maine specimen is also discussed.

Black-capped Petrel (*Pterodroma hasitata*)

Status: Regular and common off North Carolina, but undocumented in the state prior to 1976 (Lee 1976).

Typical Season of Occurrence: Found during all seasons but most common during May, August, and late December through early January (Fig. 3).

Maximum Counts: Over 160 birds were seen on 22 May 1980, over 115 were seen on 28 December 1982, over 104 were seen on 8 May 1980, 82 were seen on 24 August 1985, and 154 were seen by Rowlett (pers comm.) on 8 September 1979. For additional high counts in the summer of 1992 see Chat 57:77.

Zone of Occurrence: Generally restricted to relatively deep water (100-1000 fathoms), Black-capped Petrels are most common in waters deeper than 500 fathoms (see Fig. 17 in Lee & Socci 1989).

Remarks: Black-capped Petrels were long thought to be extinct (Haney 1987). A breeding population was discovered in southeast Haiti in 1961 (Wingate 1964) and a

small population was reported in eastern Cuba in 1977 (Bond 1978). The actual population size of this species is unknown but it is believed to be small. Populations are hard to locate and monitor because of their secretive, nocturnal nesting on inaccessible cliffs. The species has been extirpated from a large portion of its former breeding range.

In view of their mobility, high flight speeds, and the regular occurrence of adults off North Carolina's coast in the breeding season, it is likely that birds nesting in Haiti actually commute to North Carolina waters to feed (Lee and Haney ms).

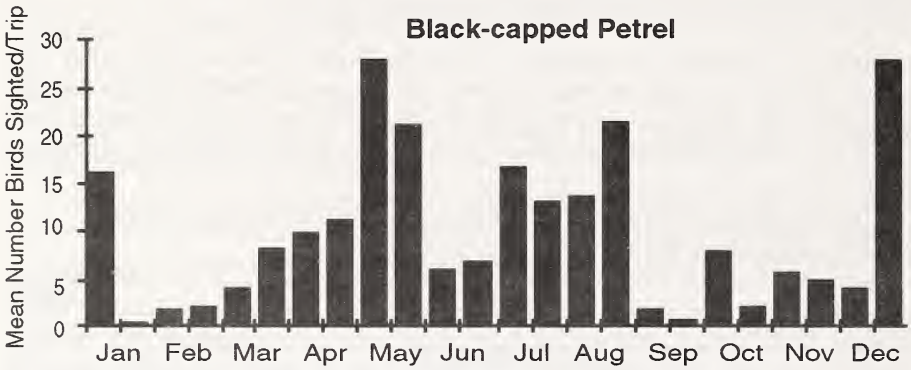


Fig. 3. Seasonal abundance of Black-capped Petrel in half month increments.

Because of their secretive inland nesting behavior, presence of unidentified breeding populations in the Bahamas, Greater Antilles or Lesser Antilles is possible. In January of 1992 Nicasico Viña (Univ. of Oriente) and I visited the area in the Sierra Maestra in eastern Cuba where Black -capped Petrels were reported. In 1977 Viña had collected six birds in this region. This was the only record for Cuba. This discovery was later interpreted by others (i.e., Bond 1985) as evidence that the species nested in the Sierra Maestra. Our 1992 field work in eastern Cuba indicated that, although this petrel was coming in at night to feed in a small restricted upwelling area adjacent to Cuba's southeastern coast, there was no indication that the species was flying inland to nests in the mountains (Lee and Viña 1993).

Without evidence of nesting in Cuba known breeding areas are restricted to the mountain ranges in southern Hispaniola where this petrel faces a number of conservation problems. The global population of Black-capped Petrels must be regarded as small and highly vulnerable. The recently discovered Dominican population (Ottenwalder and Vargas 1979) is quite small and apparently declining (>5 pairs January 1990; Lee and J. C. Haney, pers obser.). Because the species occurs regularly, and is sometimes common off the North Carolina coast, and because of the relatively small numbers known to nest in Hispaniola, it seems reasonable to assume that a significant portion of the total population is foraging off the coast of the southeastern United States, especially North Carolina.

Brinkley (1994b) discussed the evasive behavior of a Black-capped Petrel attacked

by a skua.

Bermuda Petrel (*Pterodroma cahow*)

Status: Possible rare visitor. Because of the lack of specimens, Bermuda Petrels are not officially recognized as occurring in North Carolina or North American waters.

Typical Season of Occurrence: At least six possible sightings of Bermuda Petrels have been made off North Carolina; however, only two birds were seen well enough to be identified with reasonable certainty. They were seen in April and December (Lee 1984; 1987b).

Maximum Counts: All reports are of single birds.

Zone of Occurrence: All reports are from deep water (1000+ fathoms) in the Gulf Stream.

Remarks: Watson (1966) noted that both *P. hasitata* and *cahow* have "occurred along the U.S. coast." There is apparently no basis for this statement (cf AOU 1983) and I am not aware of any pre-1966 reports away from Bermuda. Furthermore, the Bermuda Petrel closely resembles the Black-capped Petrel making identifications at sea difficult. The Black-capped Petrel is also represented off North Carolina by a smaller darker form of unknown origin that is similar in appearance and size to the Bermuda Petrel (Lee 1984). Therefore, the North Carolina records are tentative identifications only.

Soft-plumaged Petrel (*Pterodroma 'mollis'*)

Status: Possibly a very rare vagrant. Not on the official list of North Carolina or North American birds because of the absence of specimens (see Remarks).

Typical Season of Occurrence: All North Carolina reports are from May and June, but there is a November report from off Georgia.

Zone of Occurrence: The records are from deep (1000+ fathoms) Gulf Stream water.

Remarks: The three forms of *P. mollis*, all previously regarded as subspecies, are now recognized as separate species - *P. mollis, P. feae and P. madeira* (Bourne 1983). Distinguishing these birds by sight alone is difficult, perhaps impossible. Since the description of the bird off North Carolina (Lee 1984), there has been a second published report for North America. Haney et al. (1993) discussed a sight record of the Fea's Petrel, *Pterodroma feae*, made 145 km due east of St. Catherine's Island, Georgia on 9 November 1984. The status of the *P. mollis* complex in the North Atlantic was reviewed in this same publication. Based on the description they determined that the individual I saw off of North Carolina (Lee 1984) was the Soft-Plumage Petrel, *P. mollis*. They noted that my spring record was in the austral winter, a period when the southeast trade-winds extend north across the equator. They suggest that the additional spring reports from North Carolina, including a photographic record of *P. mollis* (Anon 1992), were from the southern hemisphere population. While *P. mollis* has now been reported from North Carolina's offshore waters, it is likely, based on the Haney et al. (1993) report, that either Atlantic taxa (*P. madeira* and *P. feae*), could also occur here as well. To date this has not been documented, but a recent photographic record (NCSM photo files no. 305; a video tape) appears not to be *P. mollis*. Thus,

while *P. feae* is now reported from North American waters (Haney et al. 1993) specific identity of birds found off North Carolina is still not clear. For example a male specimen of *P. feae* (USNM 536445) from the Cape Verde Islands has a distinct breast band that is nearly complete. While the area where the two bars extend into the breast do not come in contact, this could have been overlooked on the bird I saw. In the photograph (Anon 1992, Am Birds 46:1130) from 24 May 1992, however, the bird does appear to have a complete breast band.

There are numerous published studies that illustrate the difficulty of attempting to identify a specific individual bird of this group to a named taxon. These problems become magnified when dealing with sight reports and photographs made at sea. *Pterodroma mollis* (and probably other species in this complex) exhibit considerable dichromatic plumage variation (Schramn 1982) leaving major differences in their breeding distribution and phenology and slight differences in size (around 7 to 9% for wing measurements) as the reasons for their proposed specific status. (Note that this size difference is less than that between male and female Black-capped Petrels—a difference impossible to document on birds observed at sea.) Furthermore, birds with breast-bands have been seen among local birds that lack breast bands during a southward movement of seabirds off Madeira (W. R. P. Bourne pers. Comm.) and in the original study that elevated North Atlantic populations to full species, Bourne (1983a) states "...there is such a wide range of variation and overlap in their appearance, so that plumage is not a very satisfactory basis for their classification." Bourne (1983b) also reports on a *Pterodroma* specimen from Israel that had measurements in the "region of overlap of the southern form *P. mollis* and its larger representative in the North Atlantic *P. feae*." He notes that it lacked a pectoral band suggesting that it was *P. feae*.

Bibby and Del Nevo (1991) reported on a single record of *P. feae* from the Azores. However, they went on to say that in appearance and most measurements it was "close to *feae* but with a longer tail more like that of *cahow*." They further stated the unexpectedly early date for *P feae* to be ashore in the Azores with a brood patch may indicate that this population is a link between *feae* and *cahow*, two North Atlantic taxa that should perhaps be classified as a single species (see Imber 1985). Monteiro and Furness (1995) captured, photographed and measured another individual in the Azores and concluded their bird was larger than those of the Cape Verde population of *P. feae* and most like those of the small (few dozen pairs) population of *P. feae* of Bugio in the Desertas Islands. Persons reading these accounts will appreciate the levels of difficulty in the identification of these birds even when they are in the hand.

Despite the persistent frustration of not knowing which species of the 'mollis' complex occur in North Carolina (and it is quite likely there is more than one), in this case collecting of a specimen is not justified. First, it is quite possible that a single bird could not be conclusively identified to species even if it was collected. Furthermore, this would still not resolve the issue as to how many species actually occur off North Carolina or any trends in differential seasonal distributions. Second, and more importantly, *P. feae* and *P. madeira* are the rarest of European birds. *Pterodroma feae* has a total population estimated to be a few hundred pairs and *P. madeira* has a population of less than 50 pairs nesting in a single colony. The very

suggestion in 1993 by one of our local seabird enthusiasts that a North Carolina bird should be collected (under our museum's collecting permit, and despite our refusal to allow this) stirred a minor international incident (W. R. P. Bourne pers. comm.). While it is fun and interesting to speculate on the origins of the North Carolina soft plumaged petrels, we all must recognize that the questions concerning specific identity of these birds may not be resolved for some time. While there is little doubt that these are valid species, the criteria under which they are evaluated do not lend themselves to identification through the general methodologies of birdwatchers. Minimally, we must have the patience to await for their global variations to be better documented.

North Carolina reports of petrels from this species complex are available for 3 June 1981 (believed to be *mollis* by Haney et al. 1993, Lee 1984), 25 May 1991 (stated as "almost certainly the *feae* race" with no supporting evidence, American Birds 45:433), 24 May 1992 (photo stated to be *mollis*, Anon. 1992 and based on the development of the breast band in photograph in Am Birds [46:1130] appears to be *mollis*}, and 27 June 1992 (Chat 57:77).

Herald Petrel (*Pterodroma arminjoniana*)

Status: Uncommon summer visitor with marked increase in the number of reports since being recorded in 1978 (Lee 1979). Total of 10 records and reports to date.

Typical Season of Occurrence: mid to late summer.

Earliest Spring Record: 21 May 1991 (Am. Birds 45:433).

Latest Fall Record: 26 September 1993 (Chat 58:126).

Maximum Counts: All sightings have been of single birds.

Zone of Occurrence: Most North Carolina records are from deep water (1000+ fathoms) off the Outer Banks.The 8 August 92 report is from over a mere 17 fathoms of water (Chat 57:100).

Remarks: Palmer (1962) and Murphy (1936) discuss and describe the variation in coloration of Trinidad Petrels. Individuals from the only known South Atlantic nesting site exhibit extreme variability including a light phase with white and black feet and legs, an intermediate phase with pink and black feet and legs, and a dark phase with all black feet and legs (Lowe and Kinnear 1930). Most North Carolina records and reports have been of dark phase birds.

Bulwer's Petrel, (*Bulweria bulweria*).

Hass (in press.) conducted offshore surveys, as an outgrowth of the study summarized herein. He identified a Bulwer's Petrel 50 miles ENE of Cape Hatteras (35°29'N 74°47'W) on 1 July 1992. This is only the fourth report for North America and the details of this record will be published elsewhere. Haney and Wainright (1985) described a Bulwer's Petrel seen on 1 May 1984 off northeastern Florida. Taylor (1972) observed this species on 14 May 1969 between Key West and Dry Tortugas, Florida and Lee (in Haney and Wainright 1985) briefly saw a bird fitting the description of this species off North Carolina on 6 June 1979. Additional sight records exist for the southeastern Caribbean and Netherlands Antilles (Haney and Wainright 1985), but the only conclusive documentation for this hemisphere is of a bird found on Soldado Rock

off Trinidad (ffrench 1963).

Cory's Shearwater (*Calonectris diomedea*)

Status: Common, often abundant migrant. Common offshore summer visitor.

Typical Season of Occurrence: Common from mid-May through mid-November (Fig. 4).

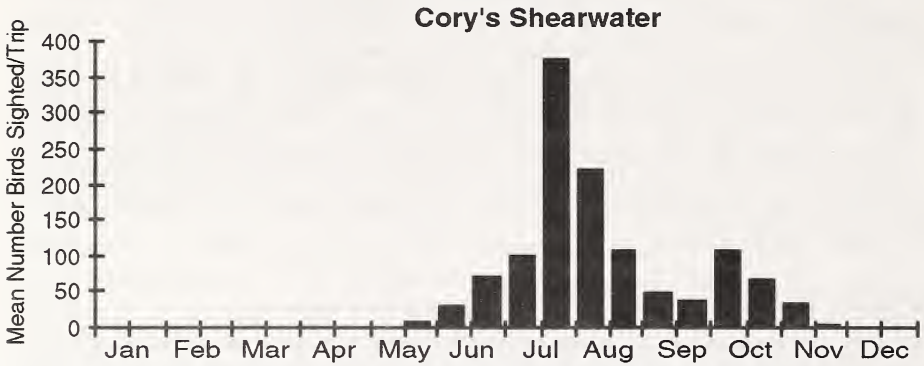


Fig. 4. Seasonal abundance of Cory's Shearwater in half month increments.

Earliest Spring Record: 8 March 1979 (Chat 43:96).

Latest Fall Record: 29 November 1979 (Chat 44:45).

Maximum Counts: The highest offshore count made during my studies was of over 3,174 birds on 19 July 1989. Rowlett (1978) and Buckley (1973) reported on large assemblages, up to 5,000 individuals, of these birds off Cape Hatteras.

Zone of Occurrence: Most common near the edge of the continental shelf and the edge of Gulf Stream, but large numbers may follow schools of fishes into other zones. Occasionally, large numbers are seen from land (Buckley 1973, Rowlett 1978).

Remarks: The type locality of *Calonectris diomedea borealis* is Chatham Island, Cape Cod, Massachusetts, and a series of Cory's Shearwaters I examined from off Woods Hole in the US National Museum are all of this race. Casual examination of material in other museums suggests that *borealis* is the most common race off the northeastern United States, while *C. d. diomedea* is well represented among the few specimens available from the southeast, including North Carolina. Both races are found off North Carolina with the nominate more common among 77 specimens examined (75.3%). Marine segregation of the two races is undetermined; *C. d. diomedea* is occasionally found off New York (AOU 1957) and all specimens from South America are *C. d. borealis* (Blake 1977).

Greater Shearwater (*Puffinus gravis*)

Status: Common to abundant migrant. Often common offshore summer visitor.

Typical Season of Occurrence: Mid-May through mid-November (Fig. 5).

Earliest Spring Record: One possible Greater Shearwater was seen on 2 April 1981, the earliest confirmed record is 17 April 1978.

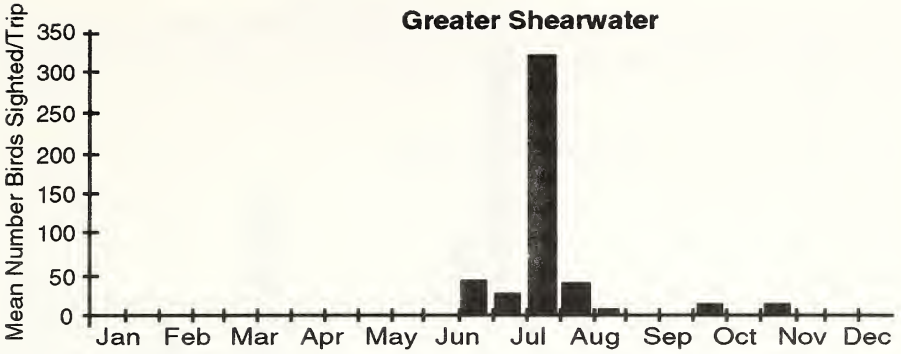

Fig. 5. Seasonal abundance of Greater Shearwater in half month increments.

Latest Record: 22 December 1985.

Maximum Counts: Over 2,950 were counted on 19 July 1989.

Zone of Occurrence: Greater Shearwaters typically occur along the inner edge of the Gulf Stream from 50 to 100 fathoms. However, this species often follows schools of feeding tuna into other zones.

Remarks: Wind conditions may arrest the northward migration of the young birds, and shearwaters arriving off North Carolina in late spring may die if insufficient food is available. Watson (1970) reported on a massive die-off of young Greater Shearwaters along the Carolina coast in early June 1969. Local newspapers reported 1000-2000 birds washed ashore along the eastern coast from the lower Delmarva Peninsula to Georgetown, South Carolina. Although extensive pathological testing failed to provide conclusive evidence for the cause of the deaths, the emaciated condition of the birds strongly suggested massive starvation. Similar but smaller die-offs occurred in late June and early July in the 1980s and 1990s (NCSM records and specimens).

Sooty Shearwater (*Puffinus griseus*)

Status: Fairly common spring migrant. Rare summer visitor and fall transient.

Typical Season of Occurrence: Most North Carolina records are from the last week of May and the first week of June with spring migration extending from mid-May through mid-June (Fig. 6). However, other individuals have been sighted in July, August, September and October (Lee 1986a).

Earliest Spring Record: 11 March 1973 (Chat 37:52).

Latest Spring Record: 29 June 1969 (NCSM 4068).

Maximum Counts: 233 north-bound migrants were counted on 23 May 1992 in 3.5 hours. 20 were counted in a hour off Core Banks on 20 May 1992 (Chat 57:54). Fifty birds were seen on 20 May 1977, the next highest count is of 8 Sooty Shearwaters on 20 May 1978.

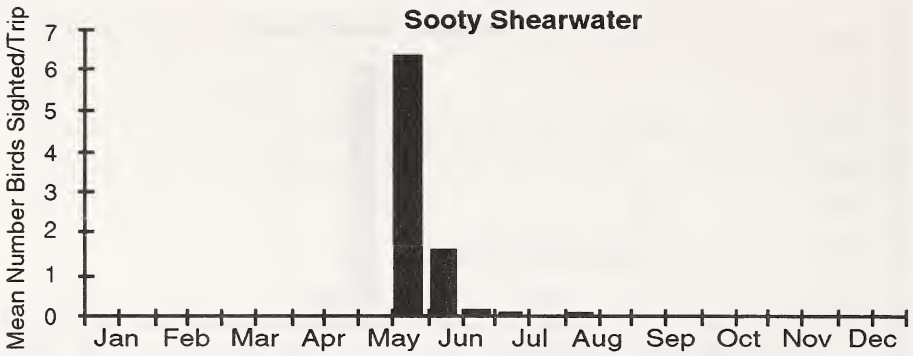

Fig. 6. Seasonal abundance of Sooty Shearwater in half month increments.

Zone of Occurrence: Many individuals migrate northward within a few miles of land (at least between Cape Hatteras and the Virginia line). Others are seen along the inner edge of the Gulf Stream, but large numbers are never seen which suggests that the majority of individuals migrate far offshore.

Remarks: No races are recognized although I am not aware of any comparisons of the morphometrics of Atlantic and Pacific populations. The Pacific population of Sooty Shearwaters numbers in the millions, but the Atlantic population is small. Atlantic birds are believed to be from nesting colonies in the Falkland Islands (Cramp and Simmons 1977), where the total population is estimated to be between one and ten thousand pairs (Croxall et al. 1984). Cooper et al. (1991) studied primary molt and migration patterns in Sooty Shearwaters based on South Atlantic beach- wrecked birds they found in South Africa. They suggested that breeding Sooty Shearwaters migrate preferentially into the North Pacific during the austral winter and that young birds, after molting in the South Atlantic, migrate into the North Atlantic. Based on the presence or absence of a bursa, both adult and young birds were collected while migrating along the North Carolina coast.

A Sooty Shearwater was reported from Bogue Sound near Emerald Isle on 14 July 1989 (Am Birds 44:74) and another was seen over Currituck Sound at US 64 (26 May 1990, Chat 55:35). These are the only North Carolina records not associated with a storm known to me of a bird not directly over the Atlantic.

Manx Shearwater (*Puffinus puffinus*)

Status: Uncommon offshore migrant. Uncommon winter visitor. Rare summer visitor. No confirmed records from North Carolina prior to 1979 (Lee and Rowlett 1979). Manx Shearwaters may be locally increasing in abundance.

Typical Season of Occurrence: Fall migration is underway as early as mid-October and peaks in late December, however, small numbers of birds are seen off North Carolina throughout the winter (Fig. 7). Spring migration is evident by mid-March and continues until mid-June.

Maximum Counts: Forty-two birds were counted on 16 March 1984.

Zone of Occurrence: With the exception of a few records of birds migrating near

the coast (i.e., Buckley 1973), all specimens and most positive visual records are from far offshore. Most of these birds were seen or collected along the inner edge of the Gulf Stream.

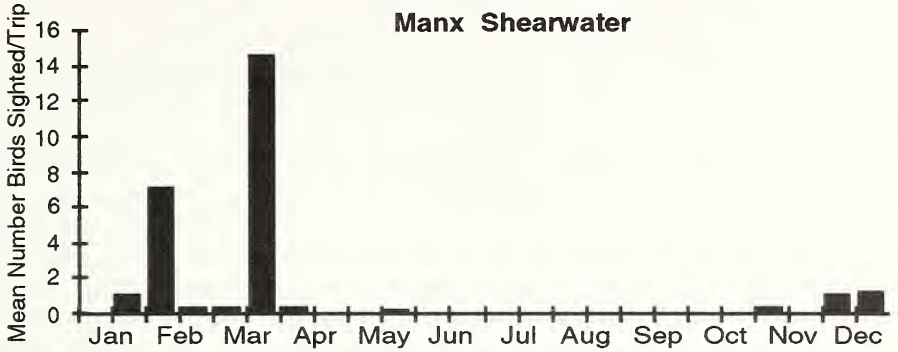

Fig. 7. Seasonal abundance of Manx Shearwater in half month increments.

Remarks: The general increase in the number of records in the southeastern United States parallels the recent expansion of the Manx Shearwater population. Some individuals occurring off the southeast area are probably from the newly formed North American colonies. Three Manx Shearwaters, banded in nesting colonies in Great Britain, were recovered in the southeast; a bird whose skeletal remains were found in 1975 in Texas had been banded at Hallival, Inverness, Scotland on 8 August 1973 (Clapp et al 1982) and two birds collected on 16 March 1984 off Oregon Inlet, North Carolina (NCSM 10108-9) had been banded as adults nearly 20 years previously (7 August 1967 and 30 June 1965) in colonies on Bardsey Island on the north coast of Wales (Chris Mead, BTO, per comm.). Banded birds from Bardsey Island have been recovered wintering off Brazil, and some have been recovered as far south as Argentina and Uruguay.

Lee (1992 and in press) surveyed the southeastern (Maryland to Texas) records of Manx Shearwater. While not common, this shearwaters occurred regularly in pelagic zones off the southeastern United States. The number of birds being reported each year seems to be increasing. Most occurrences, as expected, are during migration periods and 37.8% of all records are from the spring. The timing of migration is difficult to determine because birds are present throughout the winter and there are a small number of summer records. The local occurrence of molting adults and immatures indicates that at least some segment of the population does not undergo transequatorial migration. Based on band records it appears that summer records are, largely and perhaps exclusively, immature birds that are not obligated to return to their nesting areas in northern latitudes. The information presented by Lee (1992 and in press) on age and sex ratios, weights, molt sequence and food habits was the first recorded away from the species breeding grounds.

Little Shearwater (*Puffinus assimilis*)

Status: Very rare possible visitor. In the absence of specimens or photographs, this species has not been confirmed as occurring in North Carolina.

Typical Season of Occurrence: Unclear, there are three winter reports and two summer reports. Most other western Atlantic records are of winter birds.

Earliest Record: 14 November 1978 (Lee and Platania 1979).

Latest Record: 21 February 1985 (Lee 1988b), plus two summer sight reports.

Maximum Counts: 15 individuals were seen 37 miles east of Diamond Shoals Light on 16 August 1987 (Lee 1988b).

Zone of Occurrence: Sightings of the Little Shearwater in North Carolina have been made in the 200 to 1200 fathom zone.

Remarks: For years, two specimens were the only indication that the Little Shearwater (*Puffinus assimilis*) strayed into the western North Atlantic. The first published record is of a bird that struck a lighthouse on Sable Island, off Nova Scotia, September 1, 1896 (Dwight 1897; Am. Mus. Nat. Hist. 407683). The second is actually an earlier record of a storm-exhausted bird picked up alive on Sullivan's Island, South Carolina, in August 1883 (Mus. Comp. Zool. 220051). This bird, mistakenly identified as an Audubon's Shearwater (*Puffinus lherminieri*), changed hands several times, and it was 40 years before it was correctly identified (Peters 1924). Another 60 years elapsed before a substantial number of western Atlantic reports emerged, although there are still fewer than 20 records available. At present, there are scattered reports for the northern Atlantic south to New York, the Carolinas, and Puerto Rico (Lee 1988b).

Audubon's Shearwater (*Puffinus lherminieri*)

Status: Common, often abundant, summer visitor. Several early winter records suggest that a few Audubon's Shearwaters winter as far north as North Carolina.

Typical Season of Occurrence: Common from late April through November and large numbers (thousands) occur in late August and September (Fig. 8). There are a few winter records from December through March (Lee 1986a NCSM records).

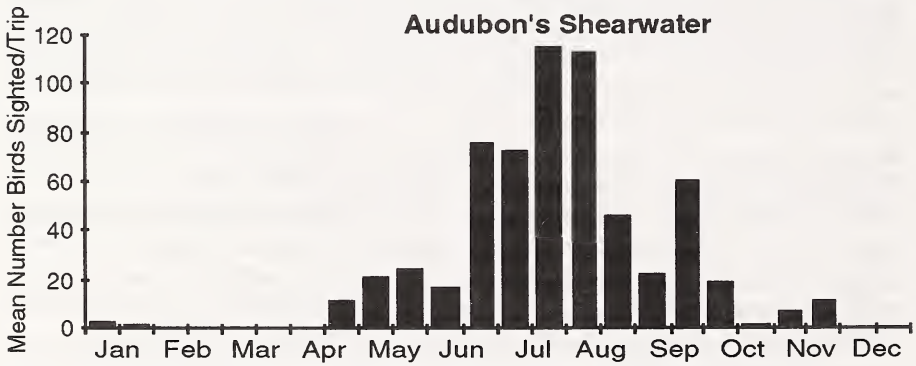


Fig. 8. Seasonal abundance of Audubon's Shearwater in half month increments.

Earliest Spring Record: The earliest definite record is 7 April 1987.

Latest Winter Record: 22 January 1989.

Maximum Counts: 2,285 were counted on 29 September 1979 (R. Rowlett pers comm) and 1,500 were reported from a single trip on 18 September 1988 (Amer. Birds 42:299). The highest count I personally tallied was over 1,000 birds on 19 July 1982.

Zone of Occurrence: Usually found along the inner edge of the Gulf Stream or over water 50 to 500 fathoms deep.

Remarks: Audubon's Shearwaters appear in large numbers soon after their nesting season. The relatively small population known from the Caribbean and the large numbers regularly seen off the North Carolina coast in late summer indicate that perhaps up to 75% of the total population summers here, although local concentrations are quite variable (Lee and Socci 1989).

Lee and Clark (1995) studied the breeding biology of Audubon's Shearwaters in the Bahamas. They note that the species' March-to-early July nesting season explains the low numbers of birds encountered in North Carolina in the spring to mid-June period. The subsequent period of maximum abundance corresponds with adults and fledglings moving north into North Carolina waters once the nesting season is completed. Weight and measurements, and comparisons of variation in coloration of under tail coverts of Bahamas birds, are within the typical range of variation of specimens collected off North Carolina (Lee 1988).

Wilson's Storm-Petrel (*Oceanites oceanicus*)

Status: Common to abundant offshore migrant and summer visitor.

Typical Season of Occurrence: Wilson's Storm-Petrels arrive in early April and most depart by early October (Fig. 9). From mid-April through early September, they are present in considerable numbers, when hundreds to thousands can be seen on a single day.

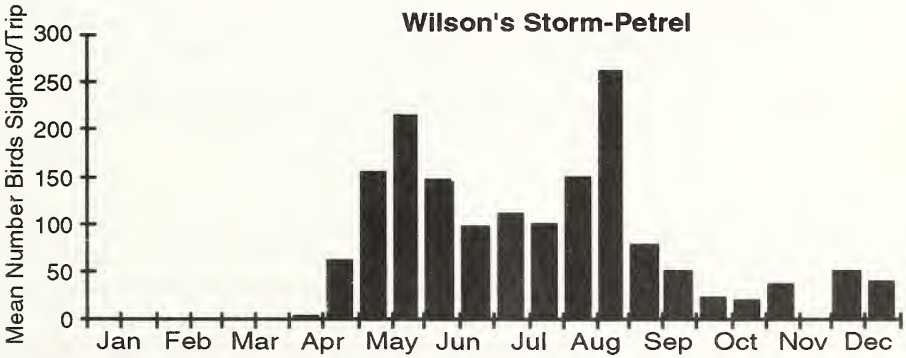


Fig. 9. Seasonal abundance of Wilson's Storm-Petrel in half month increments.

Earliest Spring Record: 8 March 1974 (Chat 38:78).

Latest Fall Record: 20 December 1986.

Maximum Counts: 1,912 were tallied on 29 August 1985.

Zone of Occurrence: Wilson's Storm-Petrels are seen in shallow water but are

most common in the 40-800 fathom area. They decrease in frequency in waters over 800 fathoms. Occasionally seen from shore.

Remarks: Prior to 1985, there were no reliable records of Wilson's Storm-Petrels north of the equator after October. With the exception of three records from the Cape Verdes and one from St. Paul's Rocks, none had been seen north of 30° S in December (Palmer 1962). My early studies had shown that this storm-petrel becomes scarce and occurs sporadically off the southeastern United States after mid-September, with the previous latest North Carolina record being 23 October 1979 and the earliest date of return 2 April 1981.

Since the winter of 1985, however, I have had three very late records all involving fairly large number of birds. On 5 December 1985, I encountered at least 153 individuals 30-40 miles off Oregon Inlet (Lee 1988a). On 9 November 1986, an offshore trip yielded a minimum count of 246 Wilson's Storm-Petrels and on 20 December 1986, we found 351 Wilson's Storm-Petrels in the same area. The 1986 record is the latest recorded date for the Northern Hemisphere. No unusual weather patterns (local or global) can account for their presence on any of these dates. It is not clear if these records are the result of changing behavioral patterns, aberrant behavior, or simply the poor coverage of pelagic regions off the southeastern United States during the winter season. However, not even a single Wilson's was encountered on other late fall surveys off North Carolina which suggests that sampling bias is not entirely responsible for the lack of other records. Additionally, birds present in the numbers found in 1985 and 1986 should have been reported from other trips, at least from somewhere in the Northern Hemisphere, if this pattern of late movement is typical.

White-faced Storm-Petrel (*Pelagodroma marina*)

Status: Uncommon but regular visitor. Not known from the state prior to 1979 (Lee and Rowlett 1979).

Typical Season of Occurrence: Most records are from late summer.

Earliest Summer Record: 24 July 1993 (Chat 58:102).

Latest Fall Record: 9 October 1982, 2 individuals (Am. Birds 38:189).

Maximum Counts: Four individuals were seen on 29 August 1985.

Zone of Occurrence: All non-storm-related sightings have been from deep water (300-500 fathoms).

Remarks: The regularity of records of White-faced Storm Petrel in the western North Atlantic indicates that they are not merely storm victims. Some adults and first-year birds from the Cape Verde Islands migrate northwest in late summer to feed. Older immature birds may travel as far as the continental shelf and slope waters off the eastern United States, where they molt before returning to the eastern North Atlantic late in the fall. All collected specimens are of the Cape Verde race *P. m. eadesi* (Watson, Lee & Backus 1986).

Leach's Storm-Petrel (*Oceanodroma leucorhoa*)

Status: Regular migrant, sporadic summer visitor and possibly rare winter visitor.

First reported from the state in 1968 (Williams and Williams 1968).

Typical Season of Occurrence: Spring migration is from mid-May to early June. Fall migration is from mid-September to early November. There are many summer records (Fig. 10).

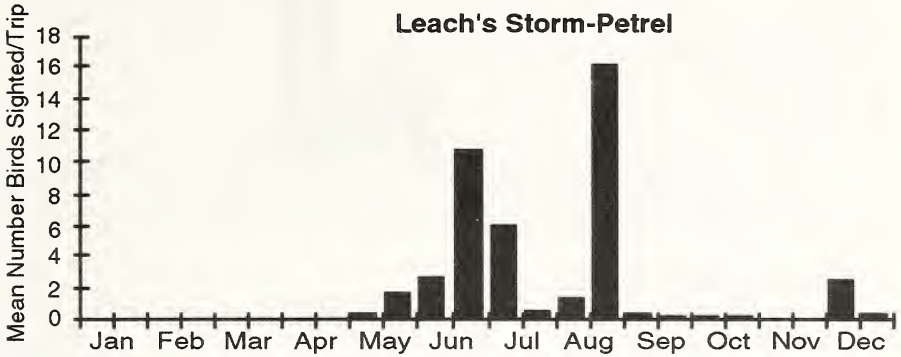


Fig. 10. Seasonal abundance of Leach's Storm-Petrel in half month increments.

Earliest Spring Record: 1 May 1992 (Chat 57:54), two birds seen on 2 May 1981.

Latest Fall Record: 20 December 1986.

Maximum Counts: A total of 88 birds were seen in five different flocks on 29 August 1985, and 133 were seen on 24 August 1985.

Zone of Occurrence: During migration, birds are seen inshore as well as in the warmer waters of the Gulf Stream. During other seasons, they are confined to deep water.

Remarks: Migration of *O. leucorhora* must be well to the east of our study area, possibly in the mid-Atlantic. The numbers of Leach's Storm-Petrels recorded in North Carolina, and the southeast in general, are too small to account for the large western Atlantic population of this species. For example Sklepkovych and Montevecchi (1989) reported over 3,360,000 breeding pairs of Leach's Storm-Petrels on a single 6.3 x 1 km island off eastern Canada. This represents only one of the North Atlantic colonies.

Band-rumped Storm-Petrel (*Oceanodroma castro*)

Status: Common summer resident, although unknown prior to 1974 (Fussell 1974) and its abundance was not discovered until 1984 (Lee 1984). Many records confirmed with specimens.

Typical Season of Occurrence: Late May through mid-August with peak abundance in mid-July (Fig. 11). Offshore specimen records are available from 5 July through 21 August. Specimen records from the southeastern US are available from as early as 14 May 1989 (Texas Cooperative Wildlife Coll. # 12440).

Earliest Record: 20 May 1993 (Chat 58:59).

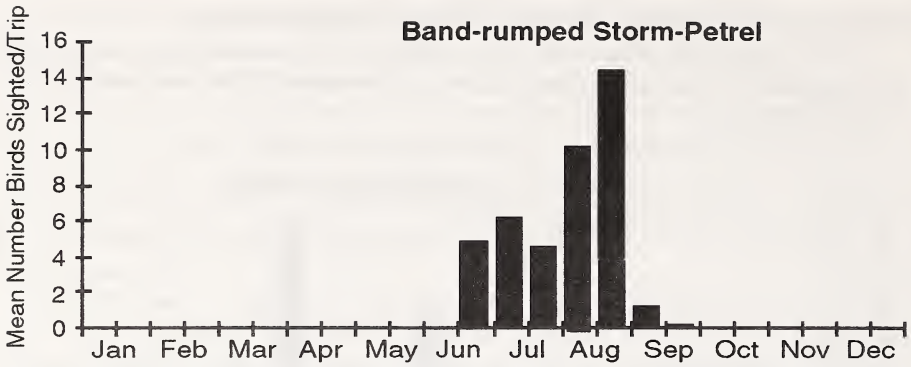

Fig. 11. Seasonal abundance of Band-rumped Storm-Petrel in half month increments.

Latest Record: 13 September 1987.

Maximum Counts: 76 were seen on 15 August 1986 and 64 were seen in scattered flocks on 24 August 1985.

Zone of Occurrence: Usually found in the 500 to 1000 fathom zone, only occasionally are individuals seen over inshore waters (i.e., Chat 57:55).

Remarks: The principal obstacle to understanding the marine distribution of Band-rumped Storm-Petrels has been an inability to distinguish this species from other white-rumped storm-petrels. This knowledge deficit has only recently been alleviated (Naveen 1981-82, and Harrison 1983a, 1983b, Lee 1984). Nevertheless, many bird-watchers fail to recognize that field marks are often inadequate for species recognition even under ideal sea conditions.

White-tailed Tropicbird (*Phaethon lepturus*)

Status: Regular but uncommon summer visitor.

Typical Season of Occurrence: Confirmed sightings of White-tailed Tropicbirds are from mid-May through mid-September.

Earliest Record: 16 May 1992 (Chat 57:55).

Latest Record: 27 September 1979 (R. Rowlett pers. comm.).

Maximum Counts: Three birds on 6 August 1985*.

Zone of Occurrence: Usually seen in the vicinity of the Gulf Stream, but there are records from shallow water in the Hatteras Bight.

Remarks: Although large storms certainly affect the movements and distribution of most seabirds and are responsible for most, if not all, coastal and inland sightings of *Phaethon*, few of the records available from offshore North Carolina seem to be of storm-driven individuals. However, the inland records of White-tailed Tropicbirds in North Carolina (two from Lake Jordan and one from a lake near Shelby) resulted from hurricanes.

Red-billed Tropicbird (*Phaethon aethereus*)

Status: Uncommon visitor. Unknown from North Carolina prior to 1981 (Lee et al. 1981).

Typical Season of Occurrence: Confirmed records of Red-billed Tropicbirds are from early May to September.

Earliest Spring Record: 16 May 1979*.

Latest Fall Record: 1 September 1981.

Maximum Counts: Two birds were collected on 16 May 1979*.

Zone of Occurrence: All records are from far offshore, usually in the Gulf Stream.

Remarks: Evidence of Red-billed Tropicbirds in this region suggests that some of the early sight records for White-tailed Tropicbirds, *Phaethon lepturus*, may be suspect. Although numerous reports of tropicbirds, chiefly of White-tailed, are available from the western North Atlantic and Gulf of Mexico, few are supported by specimens or photographs. Until recently (see Peterson 1980), the White-tailed Tropicbird was the only tropicbird recognized in popular field guides as occurring in this area. This led observers to believe that there was no reason to question tropicbird sight identifications. It also made only limited information necessary for specific identifications in the field. Misidentifications probably resulted from the lack of information available. In addition, because most of the distinguishing field characters of tropicbirds are on the dorsal surface, and flying tropicbirds are normally seen only from below, there is an even greater likelihood that some previous records were incorrect. Lee and Irvin (1983) and Lee et al. (1981) briefly reviewed the nature of tropicbird records from eastern North America, including the upper Gulf of Mexico, and discussed the more obvious field identification problems.

Masked Booby (*Sula dactylatra*)

Status: Uncommon visitor. First verified record was not reported until 1983 (Davis and Needham 1983).

Typical Season of Occurrence: late June through early October. Isolated records from early June and January also exist.

Earliest Record: 7 June 1966 (Holmes 1966).

Latest Record: 3 October 1981 (Davis and Needham 1983).

Maximum Counts: Two were collected on 14 August 1984*.

Zone of Occurrence: Usually found in deep Gulf Stream waters although three beach records exist (including a Masked Booby that resided in a tern colony in 1981).

Remarks: Nearly half of the northern records (Carolinas and Georgia) of Masked Boobies are of juvenile or subadult birds. Seven of 15 records in North Carolina, where age was recorded, were of subadults. Because of the nature of the plumage development, several of the birds reported as adults could easily have had undetected traces of subadult plumage. The presence of these young birds may indicate that they disperse farther, or remain away from the nesting colonies longer than do adults. This would, as with gannets, limit feeding competition between young and adults and would perhaps be even more important to birds living in nutrient-poor tropical systems.

Brown Booby (*Sula leucogaster*)

Status: Rare vagrant.

Typical Season of Occurrence: Too few North Carolina records exist to establish a typical season of occurrence. Other southeastern records indicate that most sightings are in winter and spring, but most North Carolina reports are from the summer.

Earliest Record: 25 April 1983 (Amer. Birds 37:858).

Latest Record: 30 December 1987.

Maximum Counts: All North Carolina records are of single birds.

Zone of Occurrence: Most southeastern records are sightings from land. The Brown Boobies seen may have been exhausted, storm-blown individuals. Sightings off North Carolina have been over shelf and Gulf Stream waters.

Remarks: Considering the number of trips taken off the southeastern coast in pursuit of seabirds, it is interesting that so few records are available. Reports and records are summarized by Hass and Patterson (in press).

Nearly all US records are of young birds.

Northern Gannet (*Morus bassanus*)

Status: Common migrant and winter visitor.

Typical Season of Occurrence: Northern gannets are abundant between late November and early March; however, they are commonly seen from late October to mid-April (Fig. 12) and many records exist outside this period. The season of occurrence was summarized by Lee and Haney (1984).

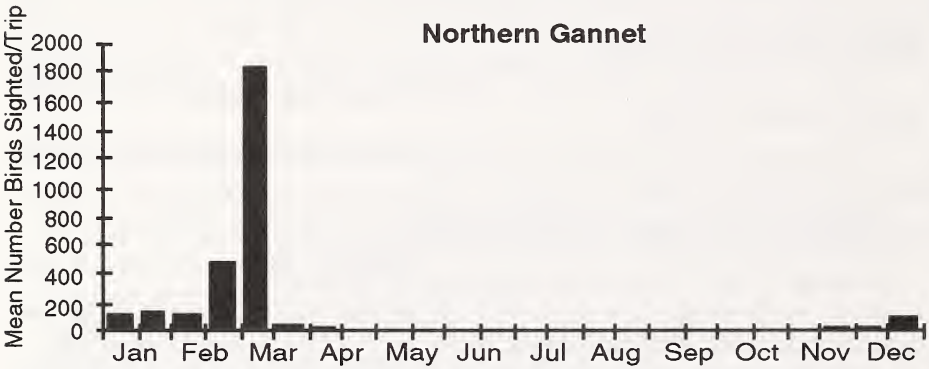


Fig. 12. Seasonal abundance of Northern Gannet in half month increments.

Maximum Counts: 10,000+ reported at Cape Point on 13 February 1982 (Chat 46:82) and 10, 650 from Bodie-Pea Island on 28 December 1991 (Chat 57:14). In three hours, 7,000 were counted in migration at Atlantic Beach on 12 April 1992 (Chat 57:56).

Zone of Occurrence: Birds are regularly seen within a few miles of the beach (often in sight of land) and over shallow water. During midwinter, gannets are most abundant in the inner to mid-shelf area (up to 40 fathoms).

Remarks: In one specimen (NCSM 9101) the radius of the left wing had obviously been broken. The bird was an adult male (2990 g) in good health when collected. Apparently the wing broke and healed while the bird was still in the nest,

since a post-fledging bird would probably not survive a broken wing.

There are few inland records of this species. In their review of the status of the genus *Sula* for the Carolinas Lee and Haney (1984) found only one inland occurrence record of Northern Gannets but it was from within a few miles of the coast. Therefore, two sightings from the Piedmont at Falls Lake, in Wake County, NC, on 30 November and 1 December 1991 (Am Birds 46:408) are interesting inland reports. Other reports from Pamlico Sound (28 December 1990, Chat 56:8) Bogue and Pamlico Sounds (6 January 1993 and 31 December 1992, Chat 58:21) and Manns Harbor (9 January 1989, Chat 54:21 are unusual but not as unexpected.

Magnificent Frigatebird (*Fregata magnificens*)

Status: Uncommon and irregular visitor.

Typical Season of Occurrence: There is one winter record which was apparently not storm-related (30 January 1939, Pearson et al. 1959). Most other reports are associated with weather disturbances and are from May to September (Lee and Booth 1979).

Earliest Record: 1 May 1953 (Chat 17:70).

Latest Record: 2 September 1949 (Chat 14:31).

Maximum Counts: Four were seen on 2 August 1944 (Chat 8:60).

Zone of Occurrence: Most reports are from the coastal area south of Cape Hatteras although there are some reports by charter boat captains of frigatebirds in deep waters off Oregon Inlet.

Remarks: Frigatebirds exhibit much plumage variation, particularly among immatures and females. Differences between species are slight and diagnostic characters are primarily based on size. Generally, the species replace each other geographically. All records from the southeast are considered *Fregata magnificens*, but north of Florida, identifications are seldom verified or reported with details that would eliminate the other species. In fact most published reports do not indicate the sex or the age of the birds. Ascension (*F. aquila*), Lesser (*F. ariel*), and Great (*F. minor*) Frigatebirds all occur in the tropical Atlantic and a Lesser Frigatebird has been identified from photographs taken on 3 July 1960 in Maine (Snyder 1961). Thus, although most records of *Fregata* in the southeast are certainly *F. magnificens* the local occurrence of other species is expected.

Other Pelecaniformes

The other species of Pelecaniformes known to occur in North Carolina are discussed briefly below. The Anhinga, *Anhinga anhinga*, is excluded because it is not found in marine habitats. All others occur in coastal areas but are not primarily oceanic in distribution. An overview of the status, distribution and season of occurrence is presented for each species.

American White Pelican, (*Pelecanus erythrorhynchos*). This pelican occurs mostly along the coast where it is an irregular and rare fall and winter visitor from 17 October to early March. Occasionally, it is seen during other seasons, and there are several summer records of birds associated with nesting Brown Pelican colonies. Inland

sightings are rare (Clinton, Chat 14:26-27; Lake Junaluska, Chat 17:69-70; Statesville, 17 November to 16 December 1979, Chat 44:83; Jordan Lake, three records). There are no offshore records.

Brown Pelican, (*Pelecanus occidentalis*). This pelican is a year-round coastal resident that is most common during the warmer months. For years, North Carolina represented the northern nesting limit of this species on the Atlantic coast, but recently the species has expanded its breeding range north to Maryland. The first known nesting in North Carolina occurred at Royal Shoal in 1929 (Pearson et al. 1942). In the last decade, the breeding population has expanded considerably. Parnell (pers comm.) has monitored an increase from 82 nests in North Carolina in 1977 to 2426 nests in North Carolina in 1988. There are now seven colonies in the state. Locally, these birds nest from late March through August.

There are a few inland sightings (Charlotte, Chat 46:43; Waynesville, Chat 44:45; Cumberland County, Chat 46:43, 47:76; Greenville, Chat 57:14; Grimesland, Chat 57:56); and the species is occasionally seen far offshore. Lee and Horner (1989) reported flocks of Brown Pelicans in the summer of 1976 foraging 50 miles SE of Beaufort. In the spring of 1989, I saw many scattered individuals as far as 8 miles off of Oregon Inlet.

Parnell (1977) reviewed the history of the nesting colony at Ocracoke Inlet and commented on the status of the North Carolina population and Parnell and Soots (1979) reported on the local distribution, habitat and behavior of the species. Young birds banded in North Carolina have been recovered commonly in Florida and as far south as the coast of Cuba (Parnell pers comm.).

Great Cormorant, (*Phalacrocorax carbo*). This northern cormorant is an uncommon, but now regular winter coastal visitor. The species was first reported in the state's coastal waters in 1970 (Chat 35:22). Sightings are increasing annually, and as many as 60 birds have been seen at one locality (Parnell pers comm.). Records are from early September to early June, and there are several summer records. There are inland records (Goldsboro, Am. Birds 43:300; Lake Phelps, Chat 58:60; Lake Townsend, Chat 59:72) and no offshore records. Grant (1991) reported on the first specimen records of Great Cormorants from the state.

Double-crested Cormorant, (*Phalacrocorax auritus*). This cormorant is a common, and often abundant, winter resident of coastal North Carolina, particularly around inlets. A few birds remain in coastal areas throughout the year. Individuals and small groups frequent inland lakes and impoundments, especially bay lakes, in the southeastern counties, during all seasons of the year (Lee 1987c). A breeding colony, discovered in 1898 at Great Lake in Craven County, was abandoned about 1950 (Grant 1970). In 1953, a few cormorants were found nesting at Lake Ellis in Craven County (Grant 1970), which was regarded by many authors as the northernmost permanent breeding site of the southeastern subspecies. Examination of specimens, however, indicates that they are intermediate between the *P. a. auritus* and *floridanus* although Post (pers comm.) does not consider *floridanus* a valid form. Nesting was reported from the piedmont of North Carolina for the first time in 1985 (Jordan Lake, Chatham County, Chat 49:102). The status of other nonmigrating birds during the summer months is unclear.

Lee and Horner (1989) reported birds at the 100 fathom contour on 3 November 1979, and other migrants were seen 10 miles off the beach in early June 1988 in the Virginia Capes region (NCSM records).

Red-necked Phalarope (*Phalaropus lobatus*)

Status: Common, often abundant offshore migrant.

Typical Season of Occurrence: Spring migration is evident from early May to early June although it may begin as early as late April. There are some summer records and fall migration extends through October (Fig. 13). There is a single winter sighting from 5 February 1940 (B.N.C.).

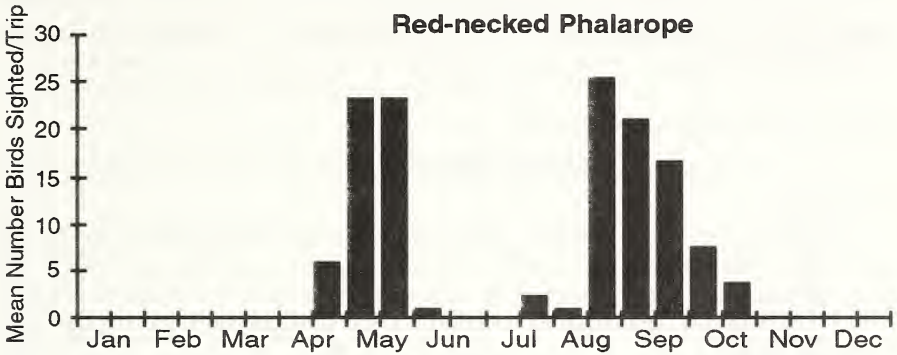


Fig. 13. Seasonal abundance of Red-necked Phalarope in half month increments.

Earliest Spring Record: 18 April 1980.

Latest Spring Record: 5 June 1992 (Chat 57:81).

Earliest Fall Record: 3 July 1987.

Latest Fall Record: 23 October 1979.

Maximum Counts: 121 seen on 21 September 1988, 100+ on 21 August 1988.

Zone of Occurrence: Red-necked Phalaropes are usually found along or near the inner edge of the Gulf Stream or other oceanic fronts. They are seldom found in water less than 20 fathoms in depth.

Remarks: Information on the winter distribution of both pelagic species of phalaropes is still poorly understood. (The Wilson's Phalarope *P. tricolor* does not occur at sea.) The winter ranges of both *P. fulicaria* and *P. lobatus* are usually described as being in the southern hemisphere yet both winter off Southern California, and the Red-necked Phalarope is known to winter north to the Azores in the eastern Atlantic. Recently, Haney (1985) noted both species off the Georgia continental shelf in February 1984, with the Red Phalarope three times more common than the Red-necked Phalarope. However, because there are essentially no other records of this species north of Florida after October, and some sightings of single birds may be misidentifications, it appears that Red-necked Phalaropes winter only rarely in the southeast. Furthermore, there is no indication that this species winters as far north as North Carolina. The only winter report for the Carolinas is a single 5 February 1940

sighting by Pearson et al. (1942).

Lee and Hass (in ms) studied the biology of both *Phalaropus lobatus* and *P. fulicaria* off the North Carolina coast. They report on season of occurrence, ecological distribution, plumage and molt, age and sex ratios, differential seasonal movements of each sex, and food habits. The stomach contents for 92 *P. fulicaria* and 37 *P. lobatus* were examined. Food items were similar in size for both species and ranged from <1 to 3 mm in length. The frequent presence of parts of *Sargassum*, including floats and the presence of *Sargassum* snails (*Litiopa melanostoma*), found in the stomachs examined, confirms that phalaropes forage in *Sargassum* regularly.

Based primarily on material obtained through the North Carolina State Museum's offshore studies, Ditmann et al. (1989) and Ditmann and Zink (1991) studied the mitochondrial DNA variation among phalaropes. They concluded that Red and Red-necked Phalaropes are sister taxa, but no DNA fragments united phalaropes as a monophyletic group.

Red Phalarope (*Phalaropus fulicaria*)

Status: Common, often abundant migrant. Sometimes present in large numbers in the winter.

Typical Season of Occurrence: Spring migration begins in early March and extends through late May although the species is rare after mid-to- late April. Fall migration is not as well defined but it appears to be underway by early October. From mid-October to the start of spring migration, Red Phalaropes can be abundant off the coast of North Carolina (Fig. 14).

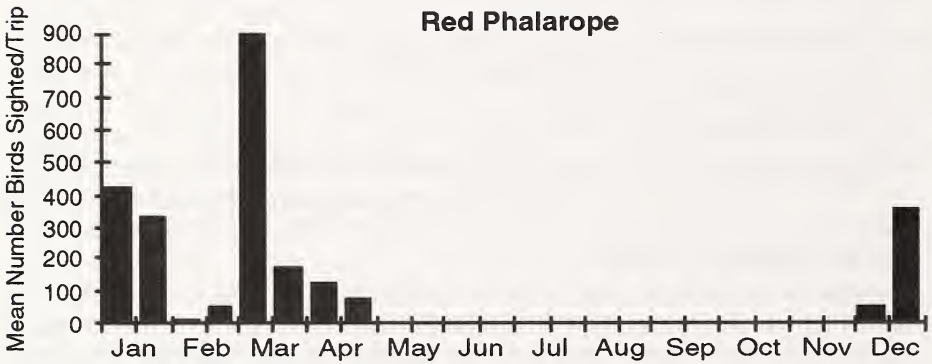

Fig. 14. Seasonal abundance of Red Phalarope in half month increments.

Earliest Record: 15 August 1992 (Chat 57:104).

Latest Record: 22 May 1992 (Chat 58:99).

Maximum Counts: Thousands were seen on 29 December 1977, 2,057+ were counted on 7 March 1987, and an estimate of over 10,000 was made of flocks seen at Beaufort on 3-5 February 1989 (Am. Birds 43:465).

Zone of Occurrence: Red Phalaropes are usually found along the inner edge of the Gulf Stream or other oceanic fronts. They are seldom seen in water less than 20

fathoms deep, along the coast, or inland.

Remarks: (See Red-necked Phalaropes.) This species is relatively common, sometimes in large numbers, along the edge of the continental shelf of North Carolina. Prior to studies by the NC State Museum and those of Haney, there was little evidence that this species commonly wintered off the southeastern United States.

Pomarine Jaeger (*Stercorarius pomarinus*)

Status: Common migrant. Small numbers of immature birds summer off North Carolina.

Typical Season of Occurrence: Most spring migration occurs between late March and early June. Some immature and subadult birds may be found off the coast throughout the summer. The start of fall migration is unclear because of the presence of summering birds, however migration peaks in late October and early November. By late December, they have moved out of the area (Fig. 15).

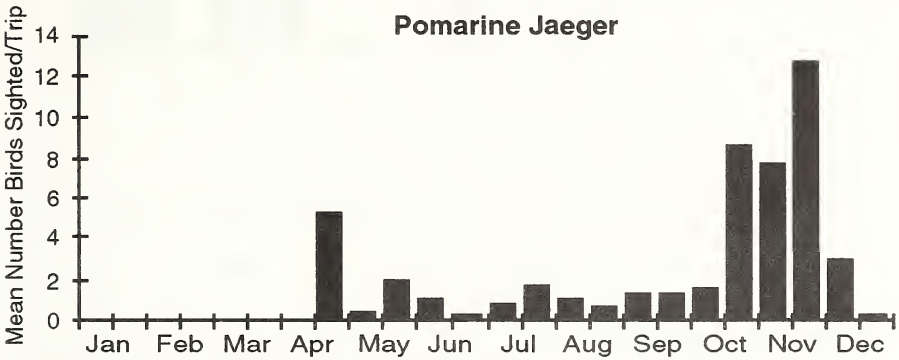


Fig. 15. Seasonal abundance of Pomarine Jaeger in half month increments.

Earliest Spring Record: 17 April 1978, 17 April 1982, 17 April 1989. (Only records supported by specimens are cited for this and other jaegers.)

Latest Winter Record: 20 December 1984.

Maximum Counts: 37+ birds were recorded on 25 November 1977 and 37 were counted on 25 October 1985.

Zone of Occurrence: Typically found between 50 and 100 fathoms. There is a single inland record for the state (Hendrickson and Allen 1985).

Remarks: Although these are the largest and easiest to identify of the three species of *Stercorarius*, there are a number of small specimens obtained in our series, which I believe would be misidentified by most bird watchers. For example, we have documented a 500 gram difference between largest and smallest females.

Between late 1989 and early 1993 there were a number of interesting regional jaeger reports published in American Bird and The Chat. These included reports that were interesting because of the season of occurrence and ones that were of birds seen at inland localities. The validity of some of identifications may be questionable because none had supporting details and this species group is hard to identify.

Parasitic Jaeger (*Stercorarius parasiticus*)

Status: Occasionally common migrant. Winter status unclear, rare summer visitor.

Typical Season of Occurrence: Fall migration occurs in September and October. Spring migration occurs from mid-May through early June (Fig. 16). Records exist outside both periods.

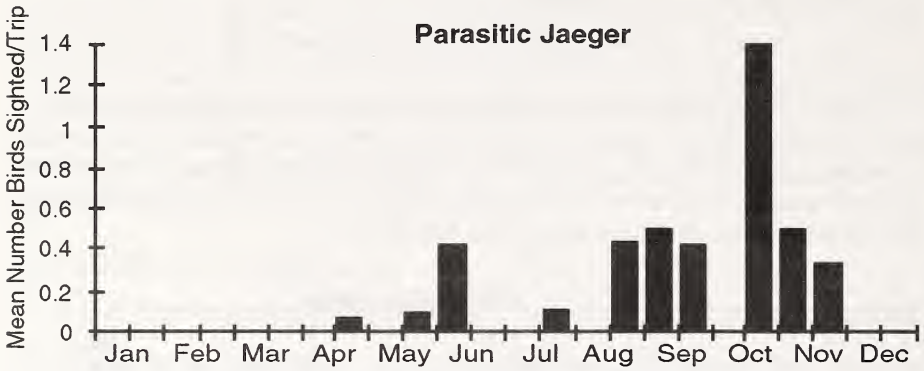


Fig. 16. Seasonal abundance of Parasitic Jaeger in half month increments.

Earliest Spring Record: 29 April 1980.

Latest Fall Record: 25 November 1979, but there are many sight reports from later dates which are assumed to be of this species.

Maximum Counts: At least 7 were seen on 25 October 1985.

Zone of Occurrence: Usually found within a few miles of the beach although a few offshore records do exist.

Remarks: See account of *S. longicaudus*. Extrapolating the local season of occurrence and relative abundance of the Parasitic Jaeger in the southeast, and North Carolina in particular, is difficult since most reports are unsubstantiated sightings and vague photographs. For the other two species, Pomarine Jaeger and Long-tailed Jaeger, a modest number of confirmed records allows a reasonable assessment of their period of occurrence, abundance, plumage and other biological information. This is not true for *S. parasiticus*.

Long-tailed Jaeger (*Stercorarius longicaudus*)

Status: Regular and common migrant. Immatures are fairly common summer visitors. First confirmed record was in 1977 (Lee and Rowlett 1977), first reported in 1973 (Buckley 1973).

Typical Season of Occurrence: Most common from mid-September through mid-October during fall migration. Spring migration peaks in May. There are records from outside both these periods, and individual birds are encountered throughout the summer (Fig. 17).

Earliest Spring Record: 22 April 1989.

Latest Fall Record: 20 December 1984.

Maximum Counts: Four were seen on 28 September 1988.

Zone of Occurrence: Sightings are usually made offshore along the outer edge of the continental shelf and beyond, although there are beach front and inland reports and records.

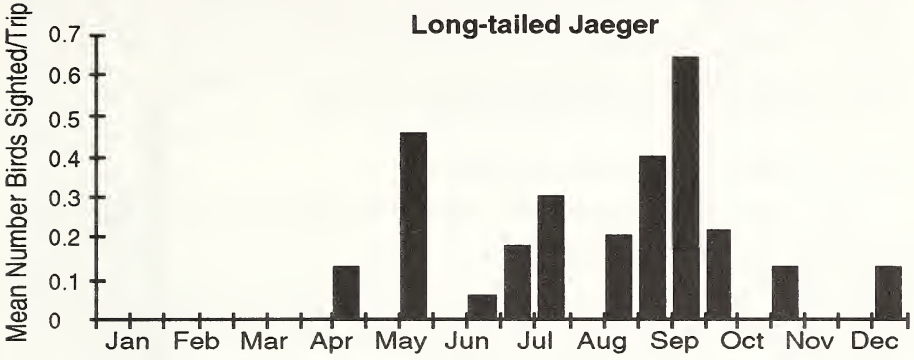


Fig. 17. Seasonal abundance of Long-tailed Jaeger in half month increments.

Remarks: Offshore studies have shown this jaeger to be not only a regular and rather common migrant off North Carolina, but also a species present in small numbers in summer and perhaps into early winter (Lee 1986a, 1987b, N.C.S.M. records). Offshore, the Long-tailed Jaeger is more common and more regular than the Parasitic Jaeger (*Stercorarius parasiticus*), which is similar in appearance. Before the mid-1970s, Parasitic Jaegers were thought to be the more common because they were often sighted from shore. Long-tailed Jaegers, which prefer deep water, were only rarely seen inshore and were therefore considered rare. In addition, misidentifications were encouraged by the lack of previous local records of Long-taileds. Although birds in adult plumage should present little problem in identification, approximately 90% of the records off North Carolina for these two species are of immatures or adults which do not yet have characteristic plumages.

Great Skua (*Catharacta skua*)

Status: Uncommon winter visitor. First specimen record for the state was reported in 1977 (Lee and Rowlett 1977).

Typical Season of Occurrence: Positive Great Skua records are available from December until mid-February, but reports outside this period which cannot be assigned to species may represent Great Skuas.

Earliest Record: 2 December 1981*.

Latest Record: 3 April 1993, photo in Am. Birds 47:404.

Maximum Counts: Most local records of skuas are of single birds. Two were seen on 19 January 1988.

Zone of Occurrence: All records are from shelf waters.

Remarks: Information presented here is based on the assumption that only two taxa occur regularly in the North Atlantic (the limited photographs and specimens

available suggest this). Plumages of many of the *antarctica* forms would be difficult to distinguish from the nominate *skua*, and there is some suggestion that *lonnbergi* occasionally visits the northern hemisphere.

Brinkley (1994a) discussed a skua he saw on 22 May 1992, a date when he reported five *C. maccormicki* off North Carolina. He concluded that it was either an "old or aberrantly plumaged" *C. skua or C. antarctica*. He then built a case for it being one of the southern hemisphere forms mentioning all the species (except *C. chilensis*) and known hybrids. While there is no doubt that this report represents an interesting sighting, the discussion while informative is inconclusive.

South Polar Skua (*Catharacta maccormicki*)

Status: Regular but uncommon migrant. First definite record for the state was reported in 1977 (Lee and Rowlett 1977).

Typical Season of Occurrence: Spring migration is evident in May, and some birds remain off the coast throughout the summer and are present until at least September. Other records of skuas outside this period may be South Polar Skuas.

Earliest Record: 18 May 1993 (Chat 58:64).

Latest Record: 19 September 1992 (Chat 57:105).

Maximum Counts: Most reports are of single birds, five on 22 May 1992 (Chat 57:58).

Zone of Occurrence: Verified records are from deep Gulf Stream waters.

Remarks: The first reported specimen of a South Polar Skua in eastern North America was from Cape Hatteras, North Carolina in May 1976 (U.S.N.M. 593001, Lee and Rowlett 1979). Subsequently, additional specimens were collected off the Grand Banks and North Carolina (U.S.N.M. and N.C.S.M.). These specimen records cast doubt on the specific identification of all North Atlantic sightings of skuas made prior to the 1970s when only the Great Skua was known from the North Atlantic.

Black-legged Kittiwake (*Rissa tridactyla*)

Status: Common and regular offshore migrant and winter visitor.

Typical Season of Occurrence: Early November through March but there are many records outside this period (Fig. 18).

Earliest Fall Record: 1 September 1979 but this is an unseasonal record; the next earliest record is 6 October 1982.

Latest Spring Record: 22 May 1992 (Chat 57:55).

Maximum Counts: Over 164 were counted on 19 January 1988, and a single flock had at least 27 birds on 29 January 1988.

Zone of Occurrence: Most records are from near the edge of the continental shelf, but Black-legged Kittiwakes are also seen in shallow water and from shore. They do not seem to be as restricted to particular zones as most other seabirds.

Remarks: Collections of birds obtained off North Carolina show that in addition to immature and adult birds, there are a large number of immature and subadult plumages representing at least the three age classes proposed by Dwight (1925) and perhaps several others as well. Variation in bill color, the amount of dark feathering around the

eye, color reduction, black in the tail and other feathers in birds in our series indicates that the middle plumage/age class is actually composed of stocks from several different years. Dates of collection of these birds rules out an orderly progression from one plumage to another in a single year. The fact that this has been overlooked is not surprising since large winter series of Black-legged Kittiwakes and birds away from breeding areas were not previously available for study.

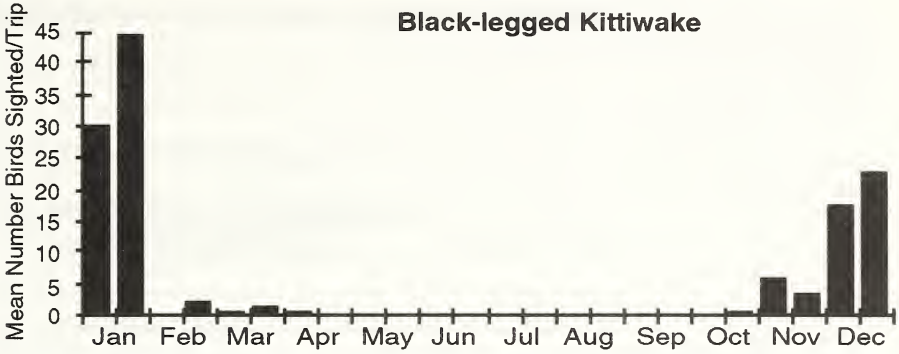


Fig. 18. Seasonal abundance of Black-legged Kittiwake in half month increments.

Sabine's Gull (*Xema sabini*)

Status: Rare migrant. First reported from North Carolina in 1977 (Culbertson 1977).

Typical Season of Occurrence: Spring migration is from March to May and fall migration occurs in September and October.

Earliest Fall Record:15 July 1992 (Chat 57:81).

Latest Fall Record: 21 October 1976 (Culbertson 1977).

Earliest Spring Record: 10 March 1983 (Chat 47:80).

Latest Spring Record: 30 May 1982 (Chat 46:120).

Maximum Counts: Three were seen on 18 September 1988 (Tove 1989).

Zone of Occurrence: Although there are both coastal and offshore records as well as one inland record, it appears that these gulls are largely offshore migrants (see Remarks).

Remarks: The rarity of this species along the coastal area of southeastern North America is probably because of the west to east fall open ocean route migration which moves these gulls away from land. The various inland records are probably also a result of eastward movement of birds from western North America.

Other Species of Gulls

Fifteen species of gulls are known to occur in North Carolina or its offshore waters. Six of these are quite common and widespread and the remaining nine are, or were, considered rare or of irregular occurrence. Many of the rarer species, however, are increasing in both numbers and regularity of appearance in the southeast.

The two pelagic species of gull, the Black-legged Kittiwake, *Rissa tridactyla* and Sabine's Gull, *Xema sabini* have already been discussed. The other gull species are primarily coastal, or are at least frequently seen from the shore. The following is a brief discussion of these gulls and Figure 19 presents the documented season of occurrence of each.

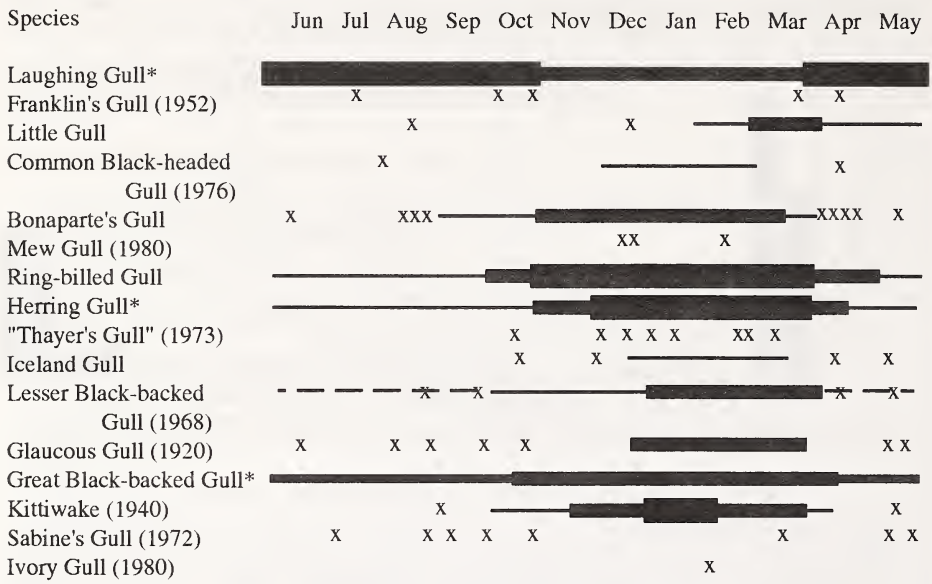


Fig. 19 Seasonal abundance abundance of coastal gull species.

Laughing Gull, (*Larus atricilla*). This is the common breeding gull of the southeastern United States. It occurs in North Carolina throughout the year. Parnell (pers. comm.) documented an increase from 9,369 pairs in 1977 to 18,979 pairs in 1988 in North Carolina. The species is mostly coastal in distribution but individuals are seen over water up to 20 fathoms deep in the summer. During winter and the migratory seasons, this gull is common offshore, and modest numbers winter along the inner edge of the Gulf Stream and on other oceanic fronts. Laughing Gulls also can be found inland, particularly during spring migration.

Franklin's Gull, (*Larus pipixcan*). This species is a very rare migrant in the southeast. There are seven reports and records from North Carolina, and the seasonal distribution is the following: Spring: 31 March 1984 (adult Chat 49:17-18), 13 April 1987 (Am. Birds 41:417); Summer: 7 July 1991 (Chat 55:62; Am Birds 45:89); Fall: 8 October 1983 (imm Chat 49:17-18), 29 October 1988 (Am. Birds 43:301). North Carolina records are from both inland and coastal localities. There are no offshore

reports. There is a single North Carolina specimen (NCSM 228).

Little Gull, (*Larus minutus*). Although this species was unknown in North Carolina or its waters until 1971 (Carter and Parnell 1974), Little Gulls now occur here regularly. Dates of occurrence range from 20 August 1978 (Chat 43:99) to 21 May 1983 (Chat 47:109), although most records are from late February through early April. A single inland record, 29 August 1971 (Chat 36:30), is now regarded as a misidentification. Nearly all reports are of birds seen from the coast. Most sightings are of birds associated with Bonaparte's Gulls. On 29 January 1988, I saw two Little Gulls ca 20 miles ENE of Oregon Inlet among a flock of Bonaparte's Gulls. This is the only offshore record for North Carolina. The increasing number of reports of Little Gulls in coastal North Carolina correlates with the recent expansion of North American populations of this European species. Coastal North Carolina is currently the southern limit of normal occurrence. There are no North Carolina specimens, but photographic records (NCSM files) confirm the presence of Little Gulls in coastal waters.

Common Black-headed Gull, (*Larus ridibundus*). This European gull was first reported in North Carolina by Cox (1968). Since then, approximately twenty sightings have been made. Most reports are from December through early March, but dates of occurrence range from 10 August 1967 (Cox 1968) to 23 April 1973 (Wright 1973). The Common Black-headed Gull is occasionally associated with Bonaparte's Gulls. All records are from coastal North Carolina, and there are no offshore records of this species. There is a single North Carolina specimen (NCSM 10373).

Bonaparte's Gull, (*Larus philadelphia*). These gulls are extremely abundant offshore during winter months. Bonaparte's Gulls are present from the beginning of September through the end of March and occur in maximum numbers from November through mid-March. A few immature birds have been seen during August, April, May, and June. Flocks of wintering Bonaparte's Gulls occur in inshore and offshore zones, but the species is most numerous along current edges of the Gulf Stream. Offshore birds in adult plumage outnumber immatures at least 20 to 1 in winter, and often the proportion of adults is even higher. There are many specimens from North Carolina.

Mew Gull, (*Larus canus*). Two reports and one photographic record of this gull are available from Hatteras, North Carolina. Lewis et al. (1981) noted an adult Mew Gull on 31 December 1980 and Lewis (1984) sighted a first-winter Mew Gull on 27 December 1983. The photographic record is from 19 February 1993 (Dinsmore et al 1995, NCSM files). These authors suggested that the sightings represent two different races of Mew Gull. While these identifications may be correct and there are a number of records of Mew Gulls in eastern North America, the absence of North Carolina specimens precludes subspecific identifications of local birds.

Ring-billed Gull, (*Larus delawarensis*). This is a common inland and coastal species, which is most abundant in the winter months. Lewis et al. (1981) sighted an estimated 24,000 at Cape Hatteras on 31 December 1980. This species is rarely seen more than a few miles from the beach, and the few offshore records may be individual vagrants. There are numerous specimens from North Carolina.

Herring Gull, (*Larus argentatus*). This species reaches the southern limit of its breeding distribution in coastal North Carolina (Parnell and Soots 1975). The number

of nesting pairs has doubled in the last decade (433 pairs in 1977, 965 pairs in 1988, Parnell, pers. comm.). Herring Gulls occur throughout the year but are most abundant in winter. Offshore, they are present from mid-September to mid-April and common from mid-October to early April. Adults are seen only occasionally over 20 miles from shore.

Glaucous Gull, (*Larus hyperboreus*). The Glaucous Gull is an uncommon winter visitor to coastal North Carolina. They are most common from December through early March with individuals occasionally encountered throughout the remainder of the year. The few inland records are largely from tidewater areas. There are no pelagic records but it has been seen up to 10 miles offshore. Individuals occurring in North Carolina vary considerably in size. Several North Carolina specimens are available. Numerous studies (e.g. Patten and Weisbrod 1974) have shown that this species hybridizes readily with *L. argentatus*, a species to which it is closely related.

Iceland Gull, (*Larus glaucoides*). North Carolina represents the southernmost area of regular occurrence of Iceland Gulls. The Iceland Gull is an uncommon and sporadic mid-to-late winter coastal visitor with extreme periods of occurrence being 15 October 1986 (Chat 51:112) and 21 April 1983 (Chat 47:109). Fussell et al. (1982) summarized sightings of this gull in North Carolina. Many reports have accumulated since their study. There are several inland (tidewater) reports, but the species primarily occurs along the coast. Helmuth (1920) first reported the Iceland Gull in the state, a bird seen 90 miles off the coast and the only oceanic report for North Carolina.

There are several visual reports of 'Thayer's Gull', [*Larus thayeri,*] available for North Carolina. Carlson (1973) reported a single bird in Kill Devil Hills on 26 October 1971, Tove (1985) sighted a 'Thayer's Gull' at Hatteras on 27 December 1983, and 2 others were seen on 18 January 1987 and on 1 March 1987 (Am Birds 41:270) at the same location. Others were seen off the Inlet at Beaufort on 3 February 1988 (Tove 1989) and Cape Hatteras point from 30 December 1992 through 19 February 1993 (Chat 58:26). There are photographs of Thayer's Gull from 5 Dec 1989 (Am Birds 44:413) and 27 December 1991 at Cape Hatteras (Chat 57:18). All Thayer's Gulls seen in North Carolina have been in first-winter plumage or adults. These and other reports were summarized by Tove (1989). Thayer's Gulls were previously considered a race of *L. argentatus*, but they are now regarded as a race of *L. glaucoides* (Snell 1989, Godfrey 1986).

Lesser Black-backed Gull, (*Larus fuscus*). The Lesser Black-backed Gull was formerly an uncommon winter coastal visitor, but during the last decade has been seen in increasing numbers. Although most common in the winter months, individuals have been reported from coastal North Carolina during all seasons. Lewis (1980) summarized the status of this gull in North Carolina, but the majority of reports accumulated subsequent to his work. The species is presently irregular south of Hatteras. All specimens from the southeast have been of a single race (*graellsii*) although various bird watchers claim to have identified other subspecies. There is a single specimen (NCSM 8195) and several photographic records from North Carolina.

Great Black-backed Gull, (*Larus marinus*). This species now breeds as far south as North Carolina (Parnell and Soots 1975). At present, only about a dozen pairs are believed to nest on coastal dredged-spoil islands in the state (Parnell pers. comm.).

Great Black-backed Gulls occur throughout the year with maximum numbers appearing in winter. This gull commonly occurs offshore and there are a number of inland records (i.e., Chat 57:18). Most of my offshore records prior to 1980 are of immature birds; however, birds of all ages occur over shelf waters, and occasionally farther out. Great Black-backed Gulls and Herring Gulls are frequently associated with winter trawlers in 10 to 20 fathoms of water. There are numerous specimens from North Carolina.

Ivory Gull, (*Pagophila eburnea*). A single unconfirmed report of this gull was provided by Lee (1980) from Carteret County on 29 January 1980. This represents the southernmost published report for the western Atlantic. An additional record in the 1800's from the Potomac River, MD/VA line (Proc. Nat. Inst. 1842) partly bridges the geographical gap between the North Carolina report and the southernmost documented occurrence in New Jersey (AOU 1953). This Potomac record has been overlooked by recent authors. No specimens or photographic records from North Carolina exist.

Arctic Tern (*Sterna paradisaea*)

Status: Rare migrant, a few summer reports and records of migrants distort any pattern of bimodal occurrence. First reported in North Carolina in 1979 (Lee and Rowlett 1979).

Typical Season of Occurrence: Most birds seen are spring migrants which pass the area from mid-April through mid-May. A few fall migrants have been seen in early September. There are two summer visual records and one summer specimen.

Earliest Spring Record: 13 April 1993 (Chat 58:64).

Latest Fall Record: 15 October 1979.

Maximum Counts: 30 were seen on 10 September 1979 in association with Hurricane David (R. Rowlett pers comm). Most reports are typically of single birds.

Zone of Occurrence: Because migration occurs far offshore there are few records of this species (see Remarks).

Remarks: The small number of records indicates that major spring migratory routes are far offshore in the western North Atlantic. Arctic Terns probably fly directly from the coast of South America to North America, and bypass the recessed coasts of the southeastern United States and the Gulf of Mexico. Fall migrants move eastward across the North Atlantic to the coast of Europe and Africa and then south to the Antarctic (Wynne-Edwards 1935, Salomonsen 1967).

Lee and Cardiff (1993) reviewed all the reports of Arctic Terns from the Southeastern United States (Maryland to Texas) and provided information on all 11 specimen records. The vast majority (84%) of the records were from the spring. Fall migration through the region was limited. The extreme scarcity of Arctic Terns in the fall is attributed to their clockwise North Atlantic migration route. The fact that their migration routes are far offshore accounts for the species' relative local rarity at other seasons. A large percentage of the specimen records are of sub-adults and birds in *portlandica* plumage.

Bridled Tern (*Sterna anaethetus*)

Status: Common summer resident. First reported from North Carolina in 1963 (Grant 1963).

Typical Season of Occurrence: Mid-May through mid-October with peak abundance between mid-August and mid-September (Fig. 20).

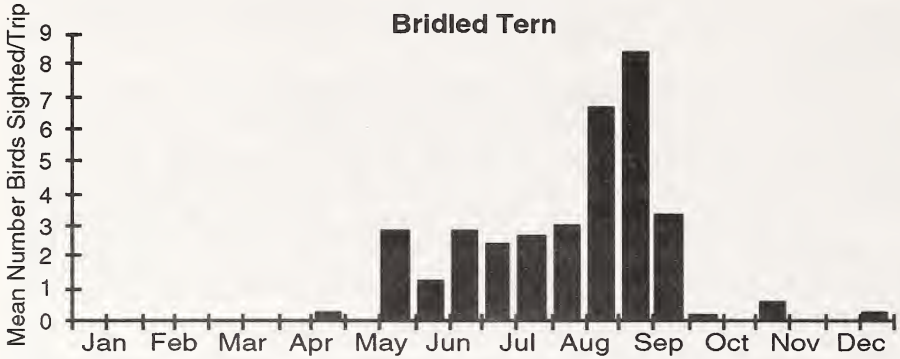


Fig. 20. Seasonal abundance of Bridled Tern in half month increments.

Earliest Spring Record: 17 April 1978.

Latest Fall Record: 20 December 1982.

Maximum Counts: The highest local counts are 45 seen on 8 September 1979 (R. Rowlett, pers comm) and 34 seen on 18 August 1989.

Zone of Occurrence: Inner edge of the Gulf Stream and its associated eddies. Less regularly found beyond the continental shelf.

Remarks: These terns are almost always associated with floating mats of *Sargassum*. Examination of stomachs and crops of 62 birds showed that they prey heavily on small fishes and invertebrates associated with *Sargassum*.

As common and as regular as this bird is off North Carolina, it is hard to explain why it remained unverified as a regular summer resident through the mid 1970's.

Sooty Tern (*Sterna fuscata*)

Status: Irregular visitor.

Typical Season of Occurrence: Early June through September (Fig. 21). One winter storm record (B.N.C.).

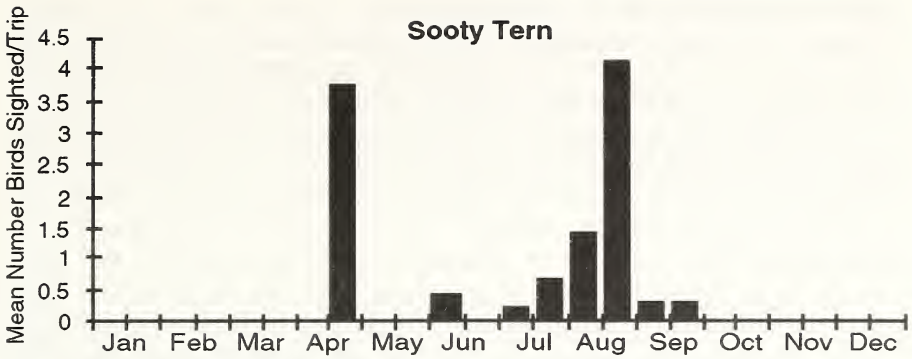

Fig. 21. Seasonal abundance of Sooty Tern in half month increments.

Earliest Record: 17 April 1989.

Latest Record: 30 September 1979 (R. Rowlett pers. comm.).

Maximum Counts: R. Rowlett counted 668 birds on 4 September 1979 and high numbers on other days associated with Hurricane David. Forty-four were seen on 17 April 1989. Off North Carolina, counts of 10 to 15 birds are unusually high.

Zone of Occurrence: Typically found in deep waters within the Gulf Stream. Beach and inland records are usually associated with tropical storms but a few individuals have been seen recently in tern colonies on the Outer Banks.

Remarks: Since the 1930s, a few Sooty Terns have nested on the Gulf Coast in Louisiana and Texas (Lowery 1974). In recent years, they have continued to appear during the nesting season in other tern colonies in the Carolinas. While current authors have considered this report to represent a recent expansion of the breeding distribution, Pearson et al (1959) reported a pair of Sooty Terns that appeared to be nesting at Cape Lookout in 1959. Fussell et al. (1981) found Sooty Terns at Cape Lookout in a mixed tern colony in 1978. Although Sooty Terns associated with nests at Cape Hatteras were watched closely and eggs were found, there was no evidence of successful reproduction in North Carolina. Nevertheless, Sooty Terns have been reported in this colony during most subsequent years, and they typically have exhibited a protracted period of residence. In a tern colony in South Carolina at least one pair successfully reproduced (Wilkinson 1988b) and there have been several additional attempts at nesting there (Wilkinson 1988a).

Brown Noddy (*Anous stolidus*)

Status: Accidental. First reported in North Carolina in 1945 (Appleberry 1951) but not confirmed until 1979* (NCSM).

Typical Season of Occurrence: Early June to early September.

Earliest Record: 25 May 1991.

Latest Record: 8 September 1977*.

Maximum Counts: Excluding storm-related records, the highest count of this species in North Carolina is 2 on 9 June 1977 (Lee and Booth 1979).

Zone of Occurrence: Most records are associated with tropical storms but three

offshore records may not be related to aberrant weather.

Remarks: Excluding the twenty or more individuals associated with Hurricane David in early September 1979 (Fussell and Allen-Grimes 1980), and 3 with Hurricane Hugo in September 1989 (Am Birds 44:253) there are only six reports of *A. stolidus* in North Carolina. Although the Brown Noddy is the second most common breeding seabird in the Caribbean (Van Halewyn and Norton 1982), the paucity of records north of Florida suggests that the species occurs off North Carolina only as an a vagrant.

Other Species of Terns

While Bridled and Sooty Terns and Brown Noddys are truly pelagic, and the Arctic Tern is pelagic during its non-breeding period, most of the other North Carolina terns at least occasionally occur in the state's offshore waters. Each is discussed briefly with emphasis on season of occurrence and relative abundance offshore. All species are supported by North Carolina specimens.

Gull-billed Tern, (*Sterna nilotica*). These terns return to North Carolina breeding colonies by mid-April and remain throughout the summer. A few individuals are usually present throughout the fall. Only a small number of pairs now nest in the state. Parnell (pers. comm.) notes a decline from 1,690 in 1973 to 153 in 1988. This species occurs primarily along the coast, although it is occasionally seen inland. My only offshore record is for a bird seen on 22 June 1977.

Caspian Tern, (*Sterna caspia*). Caspian Terns occur in North Carolina throughout the year. Most records are of coastal migrants, but occasionally migrants are reported inland. There are a few records of sporadic nesting by Caspian Terns in coastal North Carolina (Parnell and Soots 1976). I have not seen this species more than a few miles offshore.

Royal Tern, (*Sterna maxima*). These terns occur throughout the year in coastal North Carolina, but they are only common from mid-March through late October. Parnell (pers. comm.) reports an increase between 1977 and 1988 from 9,755 to 11,794 nesting pairs in the state. Unlike the other locally nesting terns, Royal Terns often forage far at sea. I have regularly seen adult birds feeding 30 to 35 miles from the closest nesting colony and commuting to the colony carrying fishes. Modest numbers are also seen offshore during migration.

Sandwich Tern, (*Sterna sandvicensis*). Approximately 1450 pairs of Sandwich Terns nested in coastal North Carolina in 1988 (Parnell pers. comm.). These birds are present from 21 March to 20 October. Occasionally migrants are seen in November and as late as 31 December 1990 (Am Birds 45:431) in southeastern coastal areas. The species regularly forages up to 12 miles off the coast, but it has not been recorded in deep oceanic zones even during migration. Small numbers can often be seen resting on the Whimbrel Shoals Buoy seven miles off the beach, although no birds have been seen at any of the towers 20 miles off the coast. The subspecies in our area is *S. s. acuflavida*, but there are two visual reports for *S. s. eurygnatha*, the Cayenne Tern (Buckley and Buckley 1984, Am Birds 44:255).

Roseate Tern, (*Sterna dougallii*). Migratory individuals are found primarily along the coast but in the spring a few individuals are also seen far at sea. Roseate Terns migrate northward in May and return south past North Carolina from August through

October (latest date of occurrence 28 October 1974). Peak fall migration is in early September. There is also one record of a bird picked up after a storm on 20 January 1937 at Cape Hatteras (Pearson et. al. 1959).

Although there are only one or two confirmed nesting records for the state (Lee and Parnell 1980, Soots and Parnell 1975b), there are numerous visual records of birds in breeding plumage in North Carolina during June, July and August (birds in spring migration are also in full breeding plumage), and two young birds in the NCSM collection from 16 and 17 August 1939 (Oregon Inlet) suggest previous nesting in the state. Roseate Terns are typically associated with mixed tern colonies and the number seems to be increasing. No additional nest records are available for the state, but with increasing interest in the protection of tern colonies and the vigilance of bird watchers, it is likely that additional nesting will be documented in the near future. Many Atlantic Coast terns are currently expanding their range and populations, and it is likely that Roseate Tern colonies could develop in North Carolina in the next several decades (Lee and Parnell 1989).

The U.S. Fish and Wildlife Service has determined that the northeastern population of Roseate Terns is Endangered and that the Florida and Caribbean population is Threatened (Federal Register: 42064).

Common Tern, (*Sterna hirundo*). This species is present from April through September. A report from 16 November 1991 (Cape Hatteras, Am Birds 46:253) is the latest reported date of this species for North Carolina. This report is at least a month and a half later than the latest confirmed date. Additional fall records with supporting documentation would be useful. All previously published winter reports are believed to be *S. forsteri* in that there are no confirmed *S. hirundo* winter records from the area. Although the species is primarily coastal, large numbers occur far offshore during both spring and fall migration. About 2,600 pairs currently nest in North Carolina (Parnell, pers. comm.).

Forster's Tern, (*Sterna forsteri*). These terns are found throughout the year in coastal North Carolina and are often abundant during the migration period. Successful breeding in the state was not confirmed until the summer of 1971 (Am Birds 25:844). Forster's Terns now breed in many areas in northern North Carolina (Soots and Parnell 1975a) and Parnell (pers. comm.) reported about a thousand pairs nested there in 1988. Offshore records are available for 6, 10, and 24 September 1976.

Least Tern, (*Sterna antillarum*). Least Terns are common coastal nesting species which are present from 28 March through 10 October. There is a single winter record from 2 January 1965 (Chat 29:22). Parnell (pers. comm.) estimated the breeding population of the state to be 1,500 pairs in 1988, but at least two sizeable colonies were not included in this estimate. Least Terns forage primarily in sounds and inlets along beach fronts, but there are several records from far offshore (29, 30, June 1977; 10 May 1979; 4 August 1989 [juv]).

Black Tern, (*Chlidonias niger*). This species is a rather common spring and fall offshore migrant. Smaller numbers are seen in coastal and inland localities throughout the state. There are numerous summer records of nonbreeding vagrants, but the typical period of occurrence is late April through early May and mid-July through mid-September. The earliest reported occurrence of Black Terns in North Carolina is

28 April 1973 (Chat 37:68); the latest is 28 October 1967 (Chat 32:31).

Dovekie (*Alle alle*)

Status: Uncommon sporadic winter visitor.

Typical Season of Occurrence: Early November through February.

Earliest Record: 3 November 1969 (Chat 34:27).

Latest Record: 9 March 1992 (Chat 57:106). One out of seasonal report from 8 June 1947 (J. B. Funderburg pers comm).

Maximum Counts: Over one thousand were seen in the winter of 1936-37 in the Oregon Inlet area (Pearson et al. 1942).

Zone of Occurrence: All records, with one exception (7 November 1977), are of birds seen along beach fronts, in sounds or blown inland by storms. The 7 November bird was seen 34 miles east of Oregon Inlet.

Remarks: Brimley (1909), Murphy and Vogt (1933), and Pearson et al. (1942) reported several Dovekie invasions into North Carolina: January 1909, 7 November 1932, December 1936 to January 1937, 8 November 1938 to 24 February 1939, and 7 and 8 December 1950.

Thick-billed Murre (*Uria lomvia*)

Status: Rare winter visitor.

Typical Season of Occurrence: Early December through February.

Earliest Record: 9 December 1966 (Chat 31:75).

Latest Record: 28 February 1960 (Chat 24:25).

Maximum Counts: Excluding 2 birds seen on 24 January 1972 at Wrightsville Beach (Amer. Birds 26:590), all records are of individual birds.

Zone of Occurrence: All local records are of birds sighted from land. Birds occur off the beach and in sounds.

Remarks: None.

Razorbill (*Alca torda*)

Status: Uncommon winter visitor.

Typical Season of Occurrence: Mid-November through mid-February with maximum numbers from mid-December through early February.

Earliest Record: 16 November 1975 (Chat 40:50).

Latest Record: 27 March 1985.

Maximum Counts: All North Carolina records are of single birds.

Zone of Occurrence: With the exception of one sighting 12 miles off Pea Island, all reports of Razorbills in North Carolina have been of birds seen from shore.

Remarks: There are relatively few records of this bird south of Cape Hatteras.

Atlantic Puffin (*Fratercula arctica*)

Status: Rare visitor.

Typical Season of Occurrence: The beginning of January through early March in

Virginia waters (Kain 1987, LeGrand and Dias 1995). The North Carolina reports are from mid-August and mid-February.

Zone of Occurrence: Based on other records, puffins are expected to be confined to zones over deep offshore waters. However, the August 1993 individual was apparently over the inner continental shelf.

Remarks: LeGrand and Dias (1995) discussed two sight reports of Atlantic Puffins off North Carolina. One in alternate plumage was sighted on 14 August 1993 and one in basic plumage was seen on 18 February. Although unknown from North Carolina until 1993, the species was certainly expected to occur locally based on other reports from the southeast. There are numerous reports from Maryland and Virginia, a possible record from Georgia described by Audubon (Ga. Ornith. Soc. 1977) and a specimen of a young bird collected in Martin County, Florida on 6 December 1986 (UF 21310; Brooks 1988). Four records from Bermuda (Amos 1991) indicate that puffins winter occasionally southward to our latitudes and that they will indeed winter far at sea.

## DISCUSSION

This study complements the general survey of marine birds of the southeastern United States provided by Clapp et al. (1982, 1983) and the work of others in the western North Atlantic (Powers 1983), and of specific areas (Rowlett 1980, Naveen unpublished [Maryland], Forsythe [South Carolina] Haney (eg. 1985) [Georgia], Sykes, Johnson [Florida], and Duncan and Harvard 1980 [Northern Gulf of Mexico]).

During the course of this study, 231 survey trips were conducted during which 277,431 individual birds were tallied and identified. The faunal composition and relative abundance of species in North Carolina's offshore waters varies considerably from season to season. A simple overview shows the presence of winter residents, summer residents, and spring and fall migrants. However, many of the summer/tropical species linger at our latitudes well into early winter, and at least one tropical species, the Black-capped Petrel, is present throughout the winter. Likewise, individuals of wintering species may be present to mid-May or longer, and various immature northern birds or adults that presumably had nesting failures appear off the North Carolina coast in the summer. Although the composition of fauna offshore at any particular time is a mosaic of species, the species which dominate particular seasons, are very predictable.

Faunal Composition: The North Atlantic boreal element is represented mostly by winter visitors such as Northern Fulmars, Northern Gannets, Black-legged Kittiwakes, Great Skuas, Razorbills, Thick-billed Murres and Dovekies. Also from the north come many spring and fall migrants such as Manx Shearwaters, Leach's Storm-Petrels, and Arctic Terns. Some of these migrants are tundra nesting species such as phalaropes (2 species), jaegers (3 species), and Bonaparte's Gulls.

Summer visitors and residents come from a wide array of geographic locations. Several of the birds are transatlantic migrants such as Cory's and Little Shearwaters, White-faced and Band-rumped Storm-Petrels and 'Soft-Plumaged' Petrels. These birds nest on various small islands off the European and African coast and in the Mediterranean Sea. Another group of birds come from nesting grounds in the tropical

and subtropical Atlantic. Most of these are from the nearby Caribbean, but at least one species is from a tropical island in the southern hemisphere. The tropical and subtropical birds include Audubon's Shearwater, Black-capped, Bermuda and Herald Petrel, tropicbirds (2 species), boobies (2 species) and Sooty, Bridled, and Noddy Terns. Additional summer birds are from the South Atlantic and are temperate to sub-polar in origin. These birds include Greater Shearwaters, Wilson's Storm-Petrels and South Polar Skuas. The Sooty Shearwater is also a transequatorial migrant but it seldom summers off North Carolina's coast.

To this faunal assemblage are added various local (eastern North American) species. Some, such as the Royal Tern are most common offshore in summer and others such as the Black, Common and Roseate Tern are most common during migration. The locally nesting Laughing Gull is present through the year but it is common offshore mainly in late fall through mid-spring. This is also true of other gulls which winter along and off our coast. Of the locally nesting birds, however, only the Royal Tern regularly forages far at sea (up to 50 miles from land). Sandwich Terns occasionally feed up to 12 miles off the beach, while other species seldom venture out of sight of land during their nesting period.

The composite fauna described above produces one of the richest assemblages of seabirds to be found anywhere in the North Atlantic. On a single day in June it is possible to see birds from the Mediterranean Sea, Greenland, the South Polar islands, islands off the African coast, the Alaskan tundra, the Caribbean and the southeastern United States, all feeding in the same area.

Seasonal Variation: The winter fauna is composed largely of gulls, and Herring Gulls make up 10% of the total number of birds encountered in December, 3% in January, 78% in February, and 57% in March. Other gulls, Greater Black-backed, Bonaparte's, Laughing, and Black Legged Kittiwakes, comprise a large percentage of the remaining fauna during this period. Other important winter birds include Red Phalaropes, and Northern Gannets. Double-crested Cormorants are abundant around inlets. Northern Fulmars not present throughout the winter are abundant by March. In general, the highest biomass occurs in winter, but the species diversity is lowest (Table 1). Nearly all winter birds are of northern origin.

Spring is a transition period with wintering species, (mostly immatures) still present, some of the summer fauna arriving, and many transient species appearing. Wilson's Storm-Petrels make up over 10% of the fauna in April and over 61% by May. Migrant Red Phalaropes (22.5%) in April are replaced by Red-necked Phalaropes (8.5%) by May. While migration extends well into June, some summer birds become quite common by May (Audubon's Shearwater [8.5%], Cory's Shearwater [2%]). In spring, there is a marked decline in total biomass and a considerable increase in diversity. Brinkley (1994a) discussed spring migration off central North Carolina.

The summer fauna is composed mostly of tropical and subtropical species, transequatorial migrants, and birds from the eastern North Atlantic. Wilson's Storm-Petrels (36% June, 16% July, 33% August), Cory's Shearwaters (18% June, 35% July, 35% August), and Audubon's Shearwaters (18% June, 14% July, 13% August) dominate the fauna, but several tropical species that exist in low numbers and are distributed in low densities forage off the Carolina coast in quantities which

suggest that North Carolina waters are important for these species during the non-breeding season (Bridled Tern, Band-rumped Storm-Petrel, Black-capped Petrel). This is probably also true for tropicbirds and Masked Boobies. Despite the small numbers of these species reported in local waters the Caribbean populations are quite small (1,600-10,000 pairs; see discussion in Lee and Socci 1989). Summer is also a period of low biomass and high diversity.

The composition of the fall fauna is similar to that of spring except that most summer birds remain through early to mid-November (Wilson's Storm-Petrels are unusual after mid-October) and are a major component of the total number of birds. Bridled Terns become common off the coast in September (2%), apparently dispersing northward after their breeding season. Jaegers, phalaropes, and Common Terns are abundant migrants, and by November Double-crested Cormorants, Northern Gannets, Herring Gulls and Laughing Gulls comprise a large percentage of the total fauna. Species diversity and biomass do not change significantly during the fall. An abrupt change to winter fauna occurs in December.

Lee and Socci (1989) graphically presented the major faunal elements for each month of the year and their Figure 32 indicated the general seasonal distribution and abundance of the more regularly encountered and generally more pelagic species of seabirds found off the North Carolina coast. More accurate depictions of the relative abundance of common species are illustrated in figures with the species accounts.

Seasonal variation in abundance indicated in Table 1 is in part a reflection of the large number of inshore gulls tallied on trips from late December through early March. Except for the spring migratory period, the number of species in the area is fairly constant, although species composition is not.

Zonal Distribution and Foraging: Most seabirds, Procellariidae in particular, forage over pelagic regions where prey is distributed in discontinuous and sporadically available patches. Nevertheless, marine birds are locally very predictable in their choice of general foraging areas. For convenience and measurable reference I have chosen to demonstrate the species distributional patterns as they relate to water depth not distance from shore. It should be understood, however, that water depth is not a prime causal factor for distribution. However, at certain seasons and localities, food availability is predictable at certain water depths.

Within a given area, birds may find food by using visual clues or olfactory means. Often, hundreds of seabirds, of a dozen or more species, will converge on an area, feed and disperse in a span of 15 to 30 minutes.

Primary foraging sites for large flocks of birds are over feeding fish schools, along current edges (oceanic fronts), and around and in thick patches of *Sargassum*. Most species are opportunistic and resort to a variety of foraging techniques. Within a broad assemblage of feeding repertoires, most species have one or two primary methods of hunting and feeding.

Current edges are one of the most important factors in attracting foraging seabirds. These edges are not static and are normally short-lived. Haney and McGillivary (1985a) demonstrated the importance of Gulf Stream fronts on the local distribution of Cory's Shearwaters off Georgia and Florida. They illustrated how a convergence of fronts formed at the continental shelf break and circulated water from 25-100 m into

thermoclines producing upwellings important for surface marine organisms. Hill and Johnson (1974) presented the theory of upwelling over the shelf break. Various authors have demonstrated the importance of oceanic fronts on the distribution of marine birds (e.g. Kinder et al. 1983 and Schneider et al. 1987).

Specific information on upwelling in the Hatteras/Oregon Inlet area of North Carolina is fragmentary but follows the same patterns detailed by Haney and McGillivary (1985a,b). Wells and Gray (1960) show, for example, how southwesterly winds in July and August blow on-shore below Hatteras and parallel to shore north of Hatteras. This causes local upwellings and cooling of offshore surface water north of Hatteras. These upwellings account for the relatively rich productivity and diversity of the offshore waters off Oregon Inlet. Inshore, because of solar radiation and surf action, productivity is not as pronounced, and biota (including birds) is less abundant.

Secondary fronts that occur within the Gulf Stream also produce, or concentrate, local upwellings (pers. observation). Gulf Stream filament eddies that break off from the Gulf Stream may also transport nutrient-rich waters and cause local upwellings which may concentrate prey and birds. These may concentrate marine birds offshore and move them into shallow water zones. The effect of seasonal changes in water temperatures (Fig. 2 in Haney and Lee 1994) and surface salinity (31-36% range of local annual variation) as they relate to upwellings in the distribution of seabirds or their prey is not clear at this time.

One of the major hunting strategies used by marine birds is aerial searching combined with plunge-diving or "dipping" for prey. Different species fly at different heights above the surface of the sea. The largest and most powerful flyers typically cover large areas (normally of low productivity zones) and fly at the greatest heights. Birds that usually hunt in this fashion are terns, jaegers, tropicbirds and boobies. Haney, Fristrup and Lee (1992) showed how flocks of various sizes are recruited from distances of 0.7 to 6.2 km. with theoretical upper limits of 20–30 km.

Most of the lower flying species hunt using both visual and olfactory stimuli. Species such as shearwaters and petrels rarely fly more than a few meters above the sea surface.

Patches of *Sargassum* attract specialists such as Bridled Terns, Audubon's Shearwaters and Masked Boobys. All three of these species feed largely on invertebrates and small fishes associated with *Sargassum*. Haney (1986) reported on the use of *Sargassum* "reefs" and its influence on the distribution of foraging seabirds.

Because of differences in types of food, in feeding behavior and in the size of prey, the various species concentrate their daily activities where specific foraging conditions are optimum, but many will converge on high productivity areas when they are available. The net result is that each species lives over or near a zone where its dietary needs are most easily met.

A basic, but probably over simplified, species breakdown of local foraging zones is as follows (with the most characteristic species identified by bold type):

Deep water (500-1200 fathoms)—beyond edge of Continental Shelf - **Black-capped Petrel**, Bermuda Petrel, Soft-Plumaged Petrel, Herald Petrel, **Band-rumped Storm-Petrel**.

Deep water (300-500 fathoms) - White-faced Storm-Petrel, Leach's Storm-Petrel,

**Sooty Tern**.

Shelf-edge (50-100 fathoms) and/or edge of Gulf Stream - Manx Shearwater, **Audubon's Shearwater**, Greater Shearwater, **Cory's Shearwater**, **Bridled Tern**, Wilson's Storm-Petrel, **Red** and **Red-necked Phalaropes**, **Pomarine Jaegers**, **Long-tailed Jaegers**, Northern Fulmar.

Inshore Waters (15-100 fathoms). No birds typically inhabit this zone. Cory's Shearwaters, Wilson's Storm-Petrels and Royal Terns are sometimes present in small numbers.

Inshore waters (2-20 fathoms) - within seven miles of beach front. **Northern Gannets**, **Sandwich Terns**, most other terns, Double-crested Cormorants, alcids, **Parasitic Jaegers**.

Water temperatures vary with season and with distance from shore (Haney and Lee 1993). While water temperature preferences are apparent for most species, the positive correlations between water depth, distance from shore, salinity, and temperature makes it difficult to determine to which factors the birds or their food sources are responding.

Table 2 illustrates the zonal distribution of seabirds tallied during offshore survey trips conducted in June, July and August. The data represent 5316 individual entries and indicate the number of birds seen per hour over different depths of water. It is clear that the shallow water zones, where we conducted our studies for the Navy have the smallest number of birds and species (Table 2 in Lee and Socci 1989).

Table 2. Summer zonal distribution (individuals/hour) of six species selected to show deep-water, shelf-edge, and inshore distributions and zones of overlap. (From Lee 1986a see also Fig. 15a and 15b)

| Survey Depth (fathoms) | Total hrs. in zone | Wilson's Storm-Petrel | Cory's Shear-water | Audubon's Shear-water | Black-capped Petrel | Band-rumped Storm-Petrel | Royal Tern | All species* |
|---|---|---|---|---|---|---|---|---|
| ≤10 | 10.42 | 0.38 | 0 | 0 | 0 | 0 | 4.41 | 11.13 |
| 11-19 | 7.25 | 1.38 | 3.17 | 0 | 0 | 0 | 2.48 | 12.41 |
| 20-30 | 35.42 | 2.32 | 4.71 | 0.62 | 0 | 0 | 0.28 | 10.42 |
| 31-50 | 12.42 | 14.75 | 6.04 | 0.72 | 0 | 0 | 1.13 | 43.32 |
| 51-99 | 4.17 | 20.86 | 5.52 | 16.07 | 0.24 | 0 | 0.96 | 50.05 |
| 100-400 | 18.50 | 25.08 | 6.97 | 4.49 | 1.14 | 0.16 | 0.54 | 78.38 |
| 401-799 | 18.17 | 24.49 | 7.15 | 4.62 | 2.92 | 1.32 | 0.17 | 71.44 |
| ≥800 | 19.75 | 14.23 | 17.92 | 15.34 | 3.39 | 1.11 | 0.10 | 61.62 |

* Includes birds not listed in this table.

There is a general lack of birds in less than 50 fathoms of water. This is not only true for actual numbers of birds encountered but, when tallies are corrected for total amount of time surveying inshore waters the minimal nature of the diversity and biomass is obvious (see Table 2). The Wilson's Storm-Petrel and Cory's Shearwater were included because they are the only pelagics that regularly occur inside the 50 fathoms zone. Nevertheless, they occur here only in low densities.

In North Carolina during the last few years there seems to have been an increase in the number of inland records of birds that have primarily marine and coastal distributions. Many of these records have been reported in either American Birds or The Chat. While many of the records were associated with Hurricane Hugo or other storms, others were not. The creation of large freshwater reservoirs during the 1970's in the Piedmont of North Carolina is one factor responsible for the increasing number of inland marine bird records. Also there has been an increase in local interest in bird watching and the network for reporting unusual records has grown. Representative records follow, but I have not attempted to make a comprehensive listing. Only species for which there were few previous non-coastal records are included.

Brown Pelican-26 February 1989, Tranters Creek, Washington, NC Chat 54:21; 10 March 1989 Greenville (Chat 54:42). Jaegers-17 and 27 November 1991, 3 December 1992, all from Jordan Lake (Am Birds 46:252, Am Birds 46:410). Laughing Gull-23 April 1989, Falls Lake; 15 May 1989, Greensboro (Chat 54:45), 21–25 November 1992, Raleigh 23 August 1992, Goldsboro (Chat 57:105). Bonaparte's Gull-15 December 1990, Transylvania County (Chat 56:12). Glaucous Gull-7-10 May 1989, Jordan Lake (Am Birds 43:1305). Greater Black-backed Gull-11 March 1989 (Chat 54:45); 20 January 1992, Jordan Lake (Am Birds 46:410). Common Terns-125 on 9 May 1989, Jordan Lake (Am Birds 43:1305). Other inland recent records are discussed in the species accounts.

## RECENT STUDIES AND STUDIES IN PROGRESS

An overview of my first 16 years of seabird surveys off North Carolina was presented at a symposium on the Outer Continental Shelf sponsored by the Mineral Management Service (Lee 1991). In this review I discussed species diversity, the sampling program, seasonal variability, biased population sex ratios, seasonal characterizations, and zonal foraging distributions. Much of the information presented in that summary parallels what was presented in the proceeding pages.

Using specimens acquired during the studies reported herein, Moser and Lee (1992) evaluated the incidence of plastic ingestion by seabirds. Gut contents of over 1,000 birds were analyzed from specimens collected off the North Carolina coast between 1975 and 1989. Twenty-one of 38 seabird species (55%) examined had ingested some amount of plastic. The most plastic was found in Procellariiformes. The occurrence of plastic in their digestive tracks clearly correlated with feeding modes and diets. Plastic ingestion by Procellariiformes increased over a 14-year period, apparently as a result of increased rates of plastic pollution in the North Atlantic. Some species showed a tendency to select specific plastic shapes and colors, indicating that they may be mistaking plastics for specific potential prey items. No evidence was found that the seabirds' health was affected by the presence of plastic. Even in Northern Fulmars, Greater Shearwaters and Red Phalaropes, the species that ingested the largest quantities and highest frequencies, there was no indication that the plastic had been detrimental to the birds.

Based on information obtained during the North Carolina offshore surveys reported in this study, Haney et al. (1992) used geometric relationships to calculate the upper

and lower limits from which seabirds can be visually recruited to form flocks in the open sea. By analyzing arrival times and flight speeds they found that the potential recruitment distances were closer to the lower theoretical limits with a mean distance of 4.5 km. This study will prove useful in projecting seabird density levels because flock size can now be calibrated against units of surface area.

Using information obtained off North Carolina and in South Atlantic Bight Haney and Lee (1994) studied the effects of meteorological conditions on the offshore dispersal of gulls. They found gull's presence in offshore habitats to be weakly associated with seasonal variability in mean wind speeds and strongly associated with monthly and accumulated air-sea heat flux and wind speed variance. Individual meteorological variables explained as much as 59-93% of seasonal changes in gull abundance. Summer meteorological conditions in much of the western North Atlantic facilitate coastal foraging by gulls but preclude efficient foraging in offshore habitats. Because of meteorological conditions gulls delay dispersal to oceanic waters in the western North Atlantic several months after the cessation of breeding.

LeGrand (1990) compiled and summarized sightings of birds displaced by Hurricane Hugo (September 1989). This work and ones discussing Hurricane David in 1979 (Fussell and Allen Grimes 1980) and Hurricane Diana in 1984 (LeGrand 1985) are the only detailed reports on the local effects of hurricanes on seabirds. LeGrand (1990) discusses the following displaced seabirds, most of which were believed to have been transported inland in the storms eye: Cory's Shearwater, Audubon's Shearwater, Leach's Storm-Petrel, White-tailed Tropicbird, Pomarine Jaeger, Parasitic Jaeger, South Polar Skua, Laughing Gull, Herring Gull, Caspian Tern, Royal Tern, Sandwich Tern, Common Tern, Arctic Tern, Forster's Tern, Least Tern, Bridled Tern, Sooty Tern, Black Tern, and Brown Noddy. Many of the records LeGrand discussed are from South Carolina.

Acknowledgments: In addition to all the people who assisted me with various aspects of this study and all the agencies that provided me with grants and other support for my offshore research, I would particularly like to thank J. Christopher Haney (Wilderness Society, Washington, DC), Mary C. Socci (Spartenburg, SC), Mary K. Clark (NCSM), and Herbert T. Hendrickson (UNC Greensboro) for reviewing various drafts of this manuscript. Socci also prpared the figures that accompany this text. Harry LeGrand (NC Natural Heritage Program) provided photographic documentation of several of the rare seabirds discussed herein.

## LITERATURE CITED

American Ornithologists' Union. 1957. The A.O.U. Checklist of North American Birds. 5 ed The American Ornithologists' Union, Baltimore. 691 pp.

American Ornithologists' Union. 1983. The A.O.U. Checklist of North American Birds, 6th ed. The American Ornithologists' Union, Allen Press, Lawrence, Kansas. pp.

Amos, E. J. R. 1991. A Guide to the Birds of Bermuda. E.J. R. Amos, Warwick, Bermuda. 206 pp.

Anonymous. 1992. A soft-plumaged petrel in the U.S.A. Birding World 5.

Appleberry, E. L. 1951. Noddy Tern seen in Brunswick County, NC. Chat 15:33.

Bibby, C. J. And A. J. Del Nevo. 1991. A first record of *Pterodroma feae* from the Azores. Bull. British Ornithologist's Club 111:183–186.
Blake, E. R. 1977. Manual of neotropical birds. Vol. 1. Univ. Chicago Press, Chicago, IL xix and 674 pp.
Bond, J. 1978. Twenty-second supplement to the check-list of birds of the West Indies (1956). The Academy Nat. Sci. Phil. 20 pp.
Bond, J. 1985. Birds of the West Indies. 5th edition. Houghton Mifflin Co., Boston.
Bourne, W. R. P. 1983a. The Soft-plumaged Petrel, the Gon-gon and the Freira, *Pterodroma mollis*, *P. feae*, and *P. madeira*. Bull. Br. Ornithol. Club 103:52-58.
Bourne, W. R. P. 1983B A Gon-gon *Pterodroma* (*mollis*) *feae* in Israel. Bull. British Ornithologist's Club 103:110.
Brimley, H. H. 1909. North Carolina Notes. Auk 26:436-437.
Brinkley, E. S. 1994a. Spring migration of seabirds off central North Carolina: 22 May 1992, with notes on two skua (*Catharacta*) taxa. Chat 58:94–101.
Brinkley, E. S. 1994b. Evasive maneuvers of Black-capped Petrel (*Pterodroma hasitata*). Chat 58:18–21.
Brooks, J. M. 1988. First record of the Atlantic Puffin for Florida. Fla. Field Naturalist 16:10–12.
Brown, M. 1980. External parasites (Mallophaga and Acarina) of Wilson's Storm Petrel, *Oceanites oceanicus* Kuhl, off the North Carolina coast. Unpublished Masters thesis. N.C. State University.
Brown, M., D. L. Hughes and G. H. Williamson. 1976. A Bridled Tern from North Carolina. Chat 40:95.
Brown, M. M. and G. S. Grant. 1970. Sooty Tern and Audubon's Shearwater off North Carolina in September. Chat 34:102-103.
Brown, R. G. B. 1970. Fulmar distribution: a Canadian perspective. Ibis 112:44-51.
Buckley, P. 1970. Brown Booby, Magnificent Frigatebird and Sabine's Gull new to Virginia. Amer. Birds 24:650-652.
Buckley, P. A. 1973. A massive spring movement, including three species new to North Carolina, at Cape Hatteras National Seashore. Amer. Birds 27:8-10.
Buckley, P. A. and F. G. Buckley. 1984. Seabirds of the North and Middle Atlantic Coast of the United States. Pp. 101-117. *In* J. P. Croxall, P. G. H. Evans, and R. W. Schreiber, Eds. Status and conservation of the World's Seabirds International Council for Bird Preservation. Tech. Publ. No. 2. 778 pp.
Carlson, C. W. 1973. Thayer's Gull at Kill Devil Hills, NC. Chat 37:50-51.
Carter, J. H. III and J. F. Parnell. 1974. Little Gulls at Cape Hatteras, NC. Chat 38:40.
Chamberlain, B. R. 1953. Franklin's Gull in North Carolina. Chat 17:23-24.
Chamberlain, B. R. 1964. Sooty Terns driven to land by Hurricane Cleo. Chat 28:134.
Clapp, R. B., R. C. Banks, D. Morgan-Jacobs, and W. A. Hoffman. 1982. Marine Birds of the Southeastern United States and Gulf of Mexico. Part I. Gaviiformes through Pelecaniformes. U.S. Fish and Wildlife Service, Office Biological Services, Washington, D.C. FWS/OBS-82101.
Clapp, R. B., D. Morgan-Jacobs and R. C. Banks. 1983. Marine Birds of the Southeastern United States and Gulf of Mexico. Part III: Charadriiformes. U.S. Fish and Wildlife Service, Division of Biological Services, Washington, D.C.

FWS/OBS - 83/30. xvi and 853 pp.
Cooper, J., L. G. Underhill, and G. Avery. 1991. Primary molt and transequatorial migration of the Sooty Shearwater. The Condor 93:924-930.
Cox, G. 1968. Black-headed Gull at Ft. Macon, N.C. Chat 32:28.
Croxall, J. P., P. G. H. Evans and R. W. Schreiber. 1984. Status and conservation of the World's Seabirds. ICBP Tech. Publ. No. 2.
Cramp, S. and K. E. L. Simmons (eds). 1977. Birds of the Western Palearctic Volume I. Oxford University Press.
Culbertson, P. M. 1977. Sabine's Gull in Forsyth County, NC. Chat 4:97.
Davis, R. and A. Bryan. 1983. An additional Red-billed Tropicbird sighted in North Carolina offshore waters. Chat 47:100-101.
Davis, R., and R. Needham. 1983. Blue-faced Booby in N.C. Amer. Birds 37:117-118.
Dinsmore, S. J., J. O. Fussell, and J. Nance. 1995. Mew Gull at Cape Hatteras, North Carolina. Chat 59:24–25.
Dittmann, D. L., R. M. Zink, and J. A. Gerwin. 1989. Evolutionary genetics of phalaropes. Auk 106:326-331.
Dittmann, D. L. and R. M. Zink. 1991. Mitochondrial DNA variation among Phalaropes and Allies. Auk 108:771-779.
DuMont, P. G. 1973. Black-browed Albatross sightings off the United States east coast. Am. Birds 27:739.
Duchein, A. 1968. Sooty Tern at Chimney Rock, N.C. Chat 327:98-99.
Duncan, C. D. and R. W. Harvard. 1980. Pelagic birds of the Northern Gulf of Mexico. A preliminary summary of distribution and abundance with comments on field identification. Amer. Birds 34:122-132.
Dwight, J., Jr. 1897. A species of shearwater (*Puffinus assimilis* [Gould]) new to the North American fauna. Proc. Biol. Soc. Wash. 11:69-70.
Dwight, J., Jr. 1925. The gulls (Laridae) of the world; their plumages, molts, variations, relationships and distribution. Bull. Am. Mus. Nat. Hist. 52:63-402.
ffrench, R. 1963. Bulwer's Petrel (*Bulweria bulwerii*) in Trinidad, West Indies. Auk 80:379.
Fisher, J. 1952. The Fulmar. Collins, London, England. xv + 496 p.
Forbush, E. H. 1929. Birds of Massachusetts and other New England states. Part 1. Massachusetts Department of Agriculture. 481 p.
Fussell, J. 1974. Specimen of Harcourt's Storm-Petrel found in North Carolina. Chat 38:23.
Fussell, J. and A. Allen-Grimes. 1980. Bird sightings associated with Hurricane David. Chat 44:89-100.
Fussell, J. O. III, M. J. (sic) Tove, and H. E. LeGrand, Jr. 1982. Reports on six recent sightings of the Iceland Gull in North Carolina with comments on problems of field identification. Chat 46:57-71.
Fussell, J. O. III, T. L. Quay, and R. J. Hader. 1981. Sooty Tern nest found near Cape Lookout, N.C. Amer. Birds 35:236.
Georgia Ornithological Society. 1977. Annotated Checklist of Georgia Birds. Occ. Publication No. 6. Georgia Ornithological Society.
Godfrey, W. E. 1986. Birds of Canada. Revised ed. National Mus. of Natural Sci.,

National Mus. of Canada, Ottawa, Ontario.
Grant, G. S. 1970. Decline of the Double-crested Cormorant as a breeding bird in North Carolina. Chat 34:34-36.
Grant, G. S. 1973. Second Bridled Tern specimen from North Carolina. Chat 37:23-24.
Grant, G. S. 1991. Specimen records of the Great Cormorant from North Carolina. Chat 55:31-32.
Grant, G. S., M. M. Browne and J. F. Parnell. 1976. The Black-legged Kittiwake in the Carolinas. Chat 40:12-13.
Grant, R. H. 1963. Bridled Tern off the North Carolina coast. Chat 27:21-22.
Hayden, B. P. 1975. Storm wave climates at Cape Hatteras, North Carolina: Recent secular variations. Science 190:981-983.
Haney, Christopher J. 1985. Wintering phalaropes off the southeastern United States: application of remote sensing imagery to seabird habitat analysis at oceanic fronts. Jour. Field Ornithology 56:321-333.
Haney, J. C. 1986. Seabird patchiness in tropical oceanic waters: the influence of sargassum "reefs". Auk 103:141-151.
Haney, J. C. 1987. Aspects of the pelagic ecology and behavior of the Black-capped Petrel (*Pterodroma hasitata*). Wilson Bull. 99:153-312.
Haney, J. C. 1990. Winter habitat of Common Loons on the Continental Shelf of the southeastern United States. Wilson Bull. 102:253-263.
Haney, J. C., C. A. Faanes, and W. R. P. Bourne. 1993. An observation of Fea's Petrel, *Pterodroma fea* (Procellariiformes: Procellariidae), off the southeastern United States, with comments on the taxonomy and conservation of Soft-plumaged and related petrels in the Atlantic Ocean. Brimleyana 18:115-123.
Haney, J. C., K. M. Fristrup, and D. S. Lee. 1992. Geometry of visual recruitment by seabirds to ephemeral foraging flocks. Ornis Scandinavica 23:49-62.
Haney, J. C. and David Lee. 1994. Air-sea heat flux, ocean wind fields, and offshore dispersal of gulls. Auk 111(2):427–440.
Haney, Christopher J. and Philip A. McGillivary. 1985a. Aggregations of Cory's Shearwaters (*Calonectris diomedea*) at Gulf Stream Fronts. Wilson Bull., 97(2). pp. 191-200.
Haney, Christopher J. and Philip A. McGillivary. 1985b. Midshelf fronts in the South Atlantic Bight and their influence on seabird distribution and seasonal abundance. Biological Oceanography 3(4). pp. 401-430.
Haney, J. C. and S. C. Wainright. 1985. Bulwer's Petrel in the South Atlantic Bight. Am. Birds 39(5):868-870.
Harrison, P. 1983a. Identification of White-rumped North Atlantic Petrels. British Birds 76:161-174.
Harrison, P. 1983b. Sea birds an identification guide. Houghton Mifflin Company. Boston. 448 pp.
Hass, T. (In press) An additional record of Bulwer's Petrel *Bulweria bulwerii* of the southeastern United States of America. Marine Ornithology.
Hass, T. And B. Patterson. (In press) An unprecedented wave of Brown Boobies (*Sula leucogaster*) in North Carolina. Chat
Helmuth, W. T. 1920. Extracts from notes made while in naval service. Auk

37(2):255-261.
Hendrickson, H. T. and D. F. Allen. 1985. First inland record of Pomarine Jaeger from the Carolinas. Chat 49:41-42.
Hill, R. B. and J. A. Johnston. 1974. A theory of upwelling over the shelf break. J. Phys. Oceanogr. 4:19-27.
Holmes, R. P. 1966. Atlantic Blue-faced Booby off Bogue Banks, North Carolina. Chat 30:107.
Imber, M. J. 1985. Origins, phylogeny and taxonomy of the gadfly petrels *Pterodroma* ssp. Ibis 127:197-229.
Jones, H. L. 1967. Status of the Razorbill in the Carolinas. Chat 31:55-57.
Kain, T. (Ed.). 1987. Virginia's Birdlife an Annotated Checklist. 2nd edition. Virginia Avifauna Number 3.
Kale, H. W. 1963. Occurrence of the Greater Shearwater along the southern Atlantic and Gulf Coast of the U.S. The Oriole 28:1-4.
Kinder, T. H., G. L. Hunt Jr., D. Schneider and J. D. Schumaker. 1983. Correlations between seabirds and oceanic fronts around the Pribilof Islands, Alaska. Estuarine, Coastal and Shelf Science. 16:309-319.
Lee, D. S. 1976. Occurrence of the Black-capped Petrel in North Carolina waters. Chat 41:1-2.
Lee, D. S. 1979. Second record of the South Trinidad Petrel (*Pterodroma arminjoniana*) for North America. Am. Birds 33:138-139.
Lee, D. S. 1980. Probable sight record of an Ivory Gull in North Carolina. Chat 44:105-106.
Lee, D. S. 1984. Petrels and storm-petrels in North Carolina's offshore waters: including species previously unrecorded for North America. Am. Birds 38:151-163.
Lee, D. S. 1986a. Seasonal distribution of marine birds in North Carolina waters, 1975-1986. Amer. Birds 40:409-412.
Lee, D. S. 1986b. Second record of the Cape Petrel in the Western North Atlantic. Chat 50:118-119.
Lee, D. S. 1987a. Common Loons wintering in offshore waters. Chat 51(2):40-42.
Lee, D. S. 1987b. December records of seabirds off North Carolina. Wilson Bull. 99(1):116-121.
Lee, D. S. 1987c. Breeding birds of Carolina bays: succession-related density and diversification of ecological islands. Chat 51:85-102.
Lee, D. S. 1988a. First record of Wilson's Storm-Petrels on a Christmas bird count. Am Birds 41:1331-1333.
Lee, D. S. 1988b. The Little Shearwater (*Puffinus assimilis*) in the western North Atlantic. Am. Birds 42:213-220.
Lee, D. S. 1989. Jaegers and skuas in the western North Atlantic: some historical misconceptions. Am. Birds 43(1):18-21.
Lee, D. S. 1991. Pelagic seabirds off the North Carolina coast: An overview of 16 years of surveys. Proceedings of Fourth Atlantic Outer Continental Shelf Region Information Transfer Meetings. MMS/OCS Study 92-0001. pg. 77-86.
Lee, D. S. 1992. Manx Shearwaters off the Southeastern US coast. (Abstract) Wilson Ornithological Society Meeting 1992 pg 14.

Lee, D. S. 1993. Comments on four pre-1853 seabirds reportedly obtained off Monterey, California. Auk 110:402-404.
Lee, D. S. (In press). Pelagic ecology of Manx Shearwater *Puffinus puffinus* off the Southeastern United States of America. Marine Ornithology.
Lee, D. S. and J. Booth Jr. 1979. Seasonal distribution of offshore and pelagic birds in North Carolina waters. Amer. Birds 35:715-721.
Lee, D. S. and S. Cardiff. 1993. The status of the Arctic Tern in the coastal and offshore waters of the southeastern United States. Jour. Field Ornith 64:158-168.
Lee, D. S. and M. K. Clark. 1995. Seabirds of the Exuma Land and Sea Park. Bahamas Journal of Science 2:2-9, 15-21.
Lee, D. S., J. B. Funderburg, and M. K. Clark. 1982. A distributional survey of North Carolina mammals. Occas. Papers of the North Carolina Biological Survey. 72 p.
Lee, D. S. and G. Grant. 1986. An albino Greater Shearwater: feather abrasion and flight energetics. Wilson Bulletin 98:488-490.
Lee, D. S. and C. Haney. 1984. The genus Sula in the Carolinas: an overview of the phenology and distribution of gannets and boobies in the South Atlantic Bight. Chat 48(2):29-45.
Lee, D. S. and K. O. Horner. 1989. Movements of land-based birds off the Carolina coast. Brimleyana 15:111-121.
Lee, D. S. and E. W. Irvin. 1983. Tropicbirds in the Carolinas: Status and period of occurrence of two tropical pelagic species. Chat 47(1):1-13.
Lee, D. S. and J. F. Parnell. (ed) 1990. Endangered, Threatened and Rare Fauna of North Carolina. Part III. A Re-evaluation of the Birds. Occas. Papers. N.C. Biol. Survey. 1990-1. 52 pp.
Lee, D. S. and S. P. Platania. 1979. Unverified sight records of seabirds in North Carolina waters. Chat 43:79-81.
Lee, D. S. and R. A. Rowlett. 1979. Additions to the seabird fauna of North Carolina. Chat 43:1-9.
Lee, D. S. and M. C. Socci. 1989. Potential effects of oil spills on seabirds and selected other oceanic vertebrates off the North Carolina coast. Occas. Pap. NC Biol. Surv. 1989-1. 64 pp.
Lee, D. S. and N. Viña. 1993. A re-evaluation of the status of *Pterodroma hasitata* in Cuba. Ornitologia Neotropical 4:99-101.
Lee, D. S., D. B. Wingate, and H. W. Kale II. 1981. Records of Tropicbirds in the North Atlantic and upper Gulf of Mexico, with comments on field identification. Am. Birds 35:887-890.
LeGrand, H. E., Jr. 1985. South Atlantic Coast Region. Am Birds 33:715-721.
LeGrand, H. E., Jr. 1990. Bird sightings in the Carolinas associated with Hurricane Hugo. Chat 54:73-78.
LeGrand, H. E. Jr. And N. W. Dias. 1995. Two records of Atlantic Puffin for North Carolina. Chat 59:93–94.
LeGrand, H. E. Jr. and W. C. Hunter. 1985. Two records of the Franklin's Gull for North Carolina. Chat 49:17-18.
LeGrand, H. E. Jr. and M. Tove. 1980. Immature Lesser Black-backed Gull in Carteret County, N.C. Chat 44:82-83.

Lewis, R. H. 1980. Lesser Black-backed Gulls in the Carolinas. Chat 44:79-81.
Lewis, R. H. 1984. Second record of Mew Gull for North Carolina. Chat 48:94-95.
Lewis, R. H., M. Tove, and H. E. LeGrand, Jr. 1981. Rare gulls at Cape Hatteras, N.C., including first Carolina record of Mew Gull. Chat 45:75-77.
Lowe, P. R. and N. B. Kinnear. 1930s. British Antarctic ('Terra Nova') expedition 1910. Zoology, 4, No 5, Birds:103-193.
Lowery, G. 1974. Louisiana birds. 3rd ed. Baton Rouge, Louisiana: Louisiana State University Press. 651 pp.
Marsh, C. and R. J. Hader. 1974. Red Phalarope in Wake County, N.C. Chat 38:71-72.
McDaniel, J. W. 1973. Vagrant albatrosses in the western North Atlantic and Gulf of Mexico. Am. Birds 27:563-565.
Mobley, R. W. 1980. The gastrointestinal helminths of some seabirds from North Carolina. Unpublished Masters Thesis NC State Univ.
Mobley, R. W. 1981. Intestinal helminths of some NC seabirds (abstract). Southeastern coastal and Estuarine birds: a conference. Baruch Institute, Univ. S.C.
Mobley, R. W. and G. C. Miller. 1982. Helminths of some seabirds from North Carolina. Brimleyana 7:61-68.
Monteiro, L. R. And R. W. Furness. 1995. Fea's Petrel *Pterodroma feae* in the Azores. Bull. British Ornithologist's Club 115:9–14.
Moser, M. L. and D. S. Lee. 1989. Ingestion of marine plastics by western Atlantic seabirds. Report to Nat. Marine Fisheries Service 57 p.
Moser, M. and D. S. Lee. 1992. A fourteen year survey of plastic ingestion by western North Atlantic seabirds. Colonial Waterbirds 15(1):83-94.
Murphy, R. C. 1936. Ocean birds of South America. Vols. I and II. Am. Mus. Nat. Hist., New York, NY. xxiv and 1245 pp.
Murphy, R. C. and W. Vogt. 1933. The Dovekie Influx of 1932. Auk 50:325-349.
Naveen, R. 1981-1982. Storm-petrels of the World: an introductory guide to their identification. Birding 13:216-239; 14:10-15, 56-62, 140-147.
Newton, J. G., O. H. Pilkey, and J. O. Blanton. 1971. An Oceanographic Atlas of the Carolina Continental Margin. Duke Marine Laboratory, Beaufort, NC. 57 pp.
Norton, A. H. 1922. The Pintado Petrel (*Daption capense*) in Maine. Auk 9:101-102.
Ottenwalder, J. A. and T. Vargas M. 1979. Nueva localidad para el Diablotin en la Republica Dominicana. Naturalista Postal 1976-1979. 36/79:85-186.
Palmer, R. S. (ed.). 1962. Handbook of North American birds, Vol. I: Loons through Flamingos. Yale Univ. Press. New Haven, CT. 567 pp.
Parnell, J. F. 1977. Birds. Pages 330-384 in Endangered and Threatened Plants and Animals of North Carolina. J. E. Cooper, S. S. Robinson, and J. B. Funderburg, editors. N.C. State Mus. Nat. Hist., Raleigh.
Parnell, J. F. and R. Soots. 1975. Herring and Great Black-backed Gulls nesting in North Carolina. Auk 92:154-157.
Parnell, J. F. and R. F. Soots. 1976. Caspian Tern nesting in North Carolina. Chat 40:14-15.
Parnell, J. F. and R. F. Soots. 1979. Atlas of Colonial Waterbirds of North Carolina Estuaries. UNC Sea Grant Publication. UNC-SG-7810.

Patten, S., Jr. and A. R. Weisbrod. 1974. Sympatry and interbreeding of Herring and Glaucous-winged gulls in southeastern Alaska. Condor 76:343-344.
Pearson, T. G., C. S. Brimley, and H. H. Brimley. 1942. Birds of North Carolina. N.C. Dept. Agric., Raleigh. 416 pp. and (revised D. L. Wray and H. T. Davis). 1959. Birds of North Carolina. N.C. State Museum of Natural History, Raleigh, 434 pp.
Peters, J. L. 1924. A second North American record for *Puffinus assimilis*. Auk 41:337-338.
Peterson, R. T. 1980. A Field Guide to the Birds East of the Rockies. Houghton Mifflin Company. Boston. 384 p.
Platania, S. P., G. S. Grant and D. S. Lee. 1986. Core temperatures of non-nesting western Atlantic seabirds. Brimleyana 12:13-18.
Post, P. W. 1967. Manx, Audubon's and Little Shearwaters in the northwestern North Atlantic. Bird Banding 38:278-305.
Potter, E. F., J. F. Parnell, and R. P. Teulings. 1980. Birds of the Carolinas. Univ. N.C. Press, Chapel Hill.
Powers, K. D. 1982. A comparison of two methods of counting birds at sea. J. Field Ornith. 53:209-222.
Powers, K. D. 1983. Pelagic Distribution of Marine Birds off the Northeastern United States. NOAA Technical Memorandum NMFS-F/NEC-27. 201 pp.
Reynolds, A. and B. Reynolds. 1978. Black-headed Gull in Eastern North Carolina. Chat 42:32-33.
Rowlett, R. A. 1978. A massive flight of Cory's Shearwaters at Cape Hatteras. Chat 42:45-46.
Rowlett, R. A. 1980. Observations of marine birds and mammals in the northern Chesapeake Bight. U.S. Fish Wildl. Serv. Biol. Ser. Prog. FWS/OBS-80/04. 87 pp.
Salomonsen, F. 1965. The geographical variation of the Fulmar (*Fulmarus glacialis*) and the zones of marine environment in the North Atlantic. Auk 82:327-355.
Salomonsen, F. 1967. Migratory movements of the Arctic Tern (*Sterna paradisaea* Pontoppidan) in the southern Ocean. K. Dan. Vidensk. Selsk. Biol. Medd. 24:1-42.
Schneider, D. N. M. Harrison and G. L. Hunt, Jr. 1987. Variation in the occurrence of marine birds at fronts in the Bering Sea. Estuarine, Coastal and Shelf Science. 25:135-141.
Schoryer, A. W. 1947. The deep diving of the loon and Oldsquaw and its mechanism. Wilson Bull. 59:151-159.
Schramm, M. 1982. Recent records of the dark form of the soft plumaged petrel *Pterodroma mollis* from the subantarctic. Cormorant 10:3–6.
Sklepkovych, B. O. and W. A. Monterecchi. 1989. The world's largest known nesting colony of Leach's Storm-Petrels on Baccalieu Island, Newfoundland. Amer. Birds 43:38-42.
Snell, R. R. 1989. Status of *Larus* gulls at Home Bay. Baffin Island. Colonial Waterbirds 12:12-23.
Snyder, D. E. 1961. First record of the Least Frigatebird (*Fregata ariel*) in North America. Auk 78:265.

Soots, R. F. and J. F. Parnell. 1975a. Ecological succession of breeding birds in relation to plant succession on dredge islands in North Carolina. N.C. Sea Grant Publ. UNC-SG. 75-27 viii and 91 pp.
Soots, R. F. and J. F. Parnell. 1975b. First record of the Roseate Tern nesting in North Carolina. Chat 39:20-21.
Taylor, J. W. 1972. Probable Bulwer's Petrel off Key West, Florida. Wilson Bull. 84:198.
Tove, M. H. 1985. A record of Thayer's Gull from Hatteras Inlet, Dare County, NC. Chat 49:44-46.
Tove, M. H. 1989. Reappraisal of the Status of gulls in the Carolinas. Chat 53:53-65.
Van Halewyn, R. and R. L. Norton. 1984. The Status and conservation of seabirds in the Caribbean. ICBP Technical Publication. No. 2:169-222.
Watson, G. E. 1966. Seabirds of the Tropical Atlantic Ocean. Smithsonian Press, Washington, DC. xxix and 120 pp.
Watson, G. E. 1970. A shearwater mortality on the Atlantic coast. Atl. Naturalist 25:75-80.
Watson, G. E., D. S. Lee, and E. S. Backus. 1986. The status and subspecific identity of White-faced Storm-Petrels in the western North Atlantic Ocean. Am. Birds 40:401-408.
Wells, H. W. and I. E. Grey. 1960. Summer upwellings off the northeast coast of North Carolina. Limn and Oceanogr. 5:108-109.
Whaling, P., D. S. Lee, J. Bonaventura, and M. Rentzepis. 1980. The body burden approach of looking at natural mercury accumulation in pelagic seabirds (abstract). 1980. Annual Meeting of American Ornithologist's Union.
Whaling, P. and E. Olson. 1981. Substantial levels of natural mercury found in three species of pelagic seabirds (abstract). Southeastern Coastal and Estuarine Birds: A Conference. Baruch Institute, Univ. of S.C.
Wilkinson, P. M. 1988a. Second nesting of the Sooty Tern in South Carolina. Chat 52:40.
Wilkinson, P. M. 1988b. First instance of a Sooty Tern's hatching on the Atlantic coast of North America. Chat 52:81-82.
Williams, R. B. and D. C. Williams. 1968. Leach's Petrel along the North Carolina coast. Chat 43:45.
Wingate, D. B. 1964. Discovery of breeding Black-capped Petrels on Hispaniola. Auk 81:147-59.
Wray, D. L., H. T. Davis, G. Hampthon, and S. Messenger. 1953. Loon flight at Cape Lookout, N.C. Chat 17:91-29.
Wright, J. S. 1973. A Black-headed Gull at Pea Island N.W.R. Chat 37:80-81.
Wynne-Edwards, V. C. 1935. On the habits and distribution of birds on the North Atlantic. Proc. Boston Soc. Natur. Hist. 40:233-346.
Wynne-Edwards, V. C. 1962.Animal Dispersion in Relation to Social Behaviour. Oliver and Boyd, Edinburgh.

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Appendix A: Basis for inclusion of the 71 bird species in this study as determined by currently available documentation (September 1995).

| Species | Specimen NCSM | Archived Photograph NCSM | Detailed Published Report |
|---|---|---|---|
| *Gavia immer* | x | | |
| *Gavia stellata* | x | | |
| *Gavia pacifica* | | | Tove 1989 |
| *Diomedea chlororhynchus* | | | Lee & Booth 1979<br>Lee 1987 |
| *Diomedea melanophris* | | | Dumont 1973 |
| *Fulmarus glacialis* | x | | |
| *Daption capense* | | | Lee 1986b |
| *Pterodroma hasitata* | x | | |
| *Pterodroma cahow* | | | Lee 1984, 1987b |
| *Pterodroma 'mollis'* | | x | Lee 1984 |
| *Pterodroma arminjoniana* | x | | |
| *Bulweria bulwerii* | | | Hass in press |
| *Calonectris diomedea* | x | | |
| *Puffinus gravis* | x | | |
| *Puffinus griseus* | x | | |
| *Puffinus puffinus* | x | | |
| *Puffinus assimilis* | | | Lee 1988b |
| *Puffinus lherminieri* | x | | |
| *Oceanites oceanicus* | x | | |
| *Pelagodroma marina* | x | | |
| *Oceanodroma leucorhoa* | x | | |
| *Oceanodroma castro* | x | | |
| *Phaethon lepturus* | x | | |
| *Phaethon aethereus* | x | | |
| *Sula dactylatra* | x | | |
| *Sula leucogaster* | | x | |
| *Morus bassanus* | x | | |
| *Fregata magnificens* | x | | |
| *Pelecanus erythrorhynchos* | x | | |
| *Pelecanus occidentalis* | x | | |
| *Phalacrocorax carbo* | x | | |
| *Phalacrocorax auritus* | x | | |
| *Phalaropus lobatus* | x | | |
| *Phalaropus fulicaria* | x | | |
| *Stercorarius pomarinus* | x | | |
| *Stercorarius parasiticus* | x | | |
| *Stercorarius longicaudus* | x | | |

| Species | Specimen NCSM | Archived Photograph NCSM | Detailed Published Report |
|---|---|---|---|
| *Catharacta skua* | x | | |
| *Catharacta maccormicki* | x | | |
| *Rissa tridactyla* | x | | |
| *Xema sabini* | x | | |
| *Larus atricilla* | x | | |
| *Larus pipixcan* | x | | |
| *Larus minutus* | | x | |
| *Larus ridibundus* | x | | |
| *Larus philadelphia* | x | | |
| *Larus canus* | | x | |
| *Larus delawarensis* | x | | |
| *Larus argentatus* | x | | |
| *Larus hyperboreus* | x | | |
| *Larus glaucoides* | | x | |
| *Larus 'thayeri'* | | x | |
| *Larus fuscus* | x | | |
| *Larus marinus* | x | | |
| *Pagophila eburnea* | | | Lee 1980 |
| *Sterna nilotica* | x | | |
| *Sterna caspia* | x | | |
| *Sterna maxima* | x | | |
| *Sterna sandvicensis* | x | | |
| *Sterna dougallii* | x | | |
| *Sterna hirundo* | x | | |
| *Sterna paradisaea* | x | | |
| *Sterna forsteri* | x | | |
| *Sterna antillarum* | x | | |
| *Sterna anaethetus* | x | | |
| *Sterna fuscata* | x | | |
| *Chlidonias niger* | x | | |
| *Anous stolidus* | x | | |
| *Alle alle* | x | | |
| *Uria lomvia* | x | | |
| *Alca torda* | x | | |
| *Fratercula arctica* | | | LeGrand & Dias 1995 |

## BRIEFS FOR THE FILES

RICKY DAVIS

(All Dates Winter 1994-1995)

RED-THROATED LOON: A rare winter report was of a single Red-throated Loon found on the Jordan L., NC C.B.C. Jan. 1 by Henry and Elizabeth Link. Also of note was the total of 1980 found on the Pea Island, NC C.B.C. (fide Paul Sykes), a record total for the count.

PACIFIC LOON: In North Carolina, Pacifics were found at Figure Eight Island (two on Feb. 5, Derb Carter), and at Wrightsville Beach (one on Feb. 14, Steve Dinsmore). In South Carolina, one was at Myrtle Beach Jan. 15 (Robin Carter, Caroline Eastman) and another or the same was at Huntington Beach State Park Jan. 29 (Pete Worthington, Van Atkins) and Feb. 9 (Bob Maxwell).

RED-NECKED GREBE: There were many fewer reports this winter than last, with birds being found in Pamlico Sound, NC Dec. 11 (Lex Glover, CBC members); at Huntington Beach, SC Jan. 1 (Robin Carter, Caroline Eastman); Pamlico River, NC Jan. 21 (Will Cook); Wrightsville Beach, NC Feb. 12 (Sam Cooper); and Beaufort, SC Feb. 25 (Robin Carter, Caroline Eastman).

EARED GREBE: The sewage treatment plant in Goldsboro, NC again hosted birds with at least five individuals spending the winter there (Eric Dean). Also singles were found at L. Townsend, NC Jan. 17-Feb. 11 (Henry Link, Herb Hendrickson); Huntington Beach, SC Jan. 22 (Robin Carter, Caroline Eastman); and at C. Hatteras Jan. 28 (Sam Cooper, Kevin Markham).

MANX SHEARWATER: The only one seen this winter was off Hatteras, NC on Feb. 11 (Brian Patteson, et al.).

AUDUBON'S SHEARWATER: From 8-12 were seen on the Feb. 11 pelagic trip out of Hatteras (Brian Patteson, et al.), once again proving that both shearwaters can be found offshore together during the winter months.

AMERICAN WHITE PELICAN: A very rare "inland" sight record was provided by one at L. Mattamuskeet, NC Jan. 26. (Nell Moore). Others were at Pea Island, NC Dec. 29-31 (Harry LeGrand) and C. Hatteras Feb. 10-27 (Steve Dinsmore, Dave Sibley, Ray Schwartz, Pat Moore).

GREAT CORMORANT: Only about the fourth inland record for this species, an immature was found at Walnut Creek L. on the Wayne County, NC C.B.C. Dec. 17 by Harry LeGrand.

DOUBLE-CRESTED CORMORANT: This species continues to increase in numbers as evidenced by the record total for an inland C.B.C. when 282 were at Jordan L., NC Jan. 1 (Barbara Roth, Will Cook).

ANHINGA: The best winter report was the bird inland at Santee N.W.R., SC Jan. 6 (Giff Beaton, R. Gifford Beaton).

LEAST BITTERN: Always a good find at any season, two were at Bear Island W.M.A., SC Feb. 11 (Bob Lego, Mary Douglas, Bob Wood) providing a rare winter report.

GREAT"WHITE" HERON: The individual found at Pea Island, NC last summer

continued to remain in its favorite North Pond spot throughout the winter on into spring (m. ob.)!

GREAT EGRET: Inland winter reports included one on the Long Cane, SC C.B.C. Dec. 23 (Drew Lanham, et al., fide Steve Wagner) and at Rocky Mount, NC Feb. 10 (Ricky Davis).

REDDISH EGRET: An extremely rare winter occurrence was the presence of two (one immature and one adult) in the Huntington Beach - Murrell's Inlet, SC area Dec. 29 to Feb. 2 (fide Jack Peachey).

WHITE IBIS: Rare inland in winter, a count of five immatures near the Congaree R., southeastern Richland County, SC Dec. 20 (Robin Carter, Caroline Eastman) was notable.

WOOD STORK: One at Bear Island W.M.A., SC Feb. 4 provided a rare winter sighting (Robin Carter, Caroline Eastman).

TUNDRA SWAN: Inland reports included two at the Savannah River Site, SC Dec. 20 (Anne and Vernon Waters); up to six in Cumberland County, NC Dec. - Feb. 7 (Hal Broadfoot, Jr., Phil Crutchfield); one at Jordan L., NC Jan. 21 (Anne and Vernon Waters); 18 at Santee N.W.R., SC Feb. 5 (Anne and Vernon Waters); and up to 14 at Rocky Mount, NC Feb. 10 - Mar. 3 (Ricky Davis).

GREATER WHITE-FRONTED GOOSE: The only report this winter was of one at Santee N.W.R., SC Dec. 11 (Robin Carter, Caroline Eastman) to Feb. 7 (Steve Patterson).

SNOW GOOSE: The farthest reports away from their usual wintering areas included singles at L. Julian, Asheville, NC Feb. 1 (Peggy Lasher); Clemson, SC Dec. 17 (fide Steve Patterson); and Tryon, NC Dec. 17 (Pat Wilkison, JoAnn Martin, fide Simon Thompson).

ROSS' GOOSE: The only report of this species involved 3 birds at Pungo N.W.R., NC Jan. 28 (Derb Carter, John Wright, Ricky Davis, CBC field trip participants) and Feb. 13 (Steve Dinsmore, Susan Barrell).

BRANT: Locally rare were five at Ft. Fisher, NC late Dec. to Jan. 10 (Mike Resch, Kevin Markham) and one at L. Mattamuskeet, NC Jan. 24 (Anne and Vernon Waters).

(EURASIAN) GREEN-WINGED TEAL: Always a good find, one was near Sneads Ferry, NC Jan. 20 (Jimi and Nell Moore) to at least Mar. 4 (Nell Moore, Lex Glover).

CINNAMON TEAL: This species is very rare in the Carolinas, thus of interest were up to two males and a female at Bear Island W.M.A., SC Feb. 4 (Lex Glover) to at least Feb. 18 (Robin Carter, Caroline Eastman). North Carolina also got into the act with a male near Sneads Ferry Feb. 14 (Nell Moore, Steve Dinsmore).

EURASIAN WIGEON: North Carolina had several reports with single adult males being found at Pea Island Jan. 28 (Sam Cooper, Kevin Markham); Orton Pond, Brunswick County Dec. 31 (Ricky Davis); and the fall season bird near Raleigh until at least Feb. 3 (Bob Hader, Joanna Perkinson, m. ob.). In South Carolina, a male and female were at Bear Island W.M.A. Jan. 2 (Anne and Vernon Waters, Larry and Carol Eldridge) until at least Feb. 4 (Robin Carter, Caroline Eastman).

RUDDY SHELDUCK: Always most likely an escape, one was nevertheless exciting at

Santee N.W.R., SC Jan. 18 and Feb. 5 (Anne and Vernon Waters).

REDHEAD: Locally uncommon to rare were six at Deerlake, Transylvania County, NC Jan. 6-30 (Betty McIlwain) and one at Shelby, NC Dec. 20 (Pat Wilkison, Dot McMurray). Also of note were 11 at Falls L., NC Dec. 9 (Ricky Davis) and 4 at Jordan L., NC Dec. 9 (Ricky Davis, m. ob.).

COMMON EIDER: The only reports included immature males at Wrightsville Beach, NC Feb. 4 - 24 (m. ob.) and N. Topsail Beach, NC Feb. 14 - 26 (m. ob.); and a female at Garden City, SC Jan. 22 (Robin Carter, Caroline Eastman, sev. ob.).

HARLEQUIN DUCK: This species was found at several locations this winter with one female at Oregon Inlet, NC Feb. 12 (Eric Dean); one male at Duck, NC Feb. 19 (Steve Dinsmore, Susan Barrell); one male at Topsail Beach, NC Dec. 21 - March (Nell and Jimi Moore, m. ob.); two females at Murrell's Inlet, SC Jan. 19 - Feb. 11 (Steve Patterson, sev. ob.); and two males at Myrtle Beach, SC Feb. 5 - 12 (Lex Glover, sev. ob.).

OLDSQUAW: This species can sometimes be hard to come by in South Carolina, thus of note were the presence of two to five in the Huntington Beach - Murrell's Inlet, SC area Dec. 11 (Robin Carter, Caroline Eastman, Jack Peachey, et al.) to Feb. 11 (Steve Patterson, Pete Worthington). Also one was found at Isle of Palms, SC Dec. 21 by Giff Beaton.

BLACK SCOTER: Uncommon inland were singles at Falls L. and Jordan L., NC Dec. 9 (Ricky Davis).

SURF SCOTER: Inland reports included six at Jordan L., NC Dec. 9 (Ricky Davis, Roger McNeill, sev. ob.); one at L. Brandt, Greensboro, NC Dec. 17 (Henry and Elizabeth Link); and one in western Sumter County, SC Feb. 9 (fide Evelyn Dabbs).

COMMON MERGANSER: In North Carolina this species was found at Pea Island Dec. 29 (Will Cook, Susan Barrell) to Jan. 27 (Ricky Davis); Lookout Shoals Lake Dam, Iredell County Dec. 19 (Adam Martin); L. Townsend Feb. 12 (Henry and Elizabeth Link); and L. Wheeler near Raleigh Feb. 20 (Ricky Davis). In South Carolina one was at Garden City on the Litchfield-Pawley's Island C.B.C. Dec. 29 (fide Jack Peachey).

RED-BREASTED MERGANSER: On Dec. 9 Ricky Davis found good numbers near Raleigh, NC with 20 at Falls L. and 55 at Jordan L. Farther inland were three at L. Moss near Shelby, NC Dec. 22 (Pat Wilkison, JoAnn Martin).

BLACK VULTURE: A very good total for Guilford County, NC was the 25 in one flock present from Dec. to Feb. (John Posey, Herb Hendrickson, Donald Allen, Danny Royster).

TURKEY VULTURE: Locally rare and a first for the count was the single individual found on the Kitty Hawk, NC C.B.C. Dec. 31 (fide Lee Yoder).

OSPREY: Unusual winter records included one on the L. Norman, NC C.B.C. Dec. 18 (Albert Conway); one at Elgin, Kershaw County, SC Feb. 3 (Lex Glover); and one on the Greenville, NC C.B.C. Jan. 1 (Gene Howe, Betty Grady, Carl Darden).

NORTHERN GOSHAWK: The only report received was of an adult at Piney Creek, Alleghany County, NC late Jan. - Feb. (James H. Coman, III). This was about the third year in a row that this area produced a Goshawk report!

BROAD-WINGED HAWK: An extremely late individual was found in eastern Rutherford County, NC Dec. 3 (G. Mayfield, fide Rick Knight). Winter reports of this hawk are very unusual and all birds should be scrutinized to rule out all other species.

ROUGH-LEGGED HAWK: An individual near Asheville, NC Jan. 8 (Gail Whitehurst) was the only one reported this winter and it provided a very rare local record.

GOLDEN EAGLE: Adults of this always exciting species were found at Bear Island W.M.A., SC Jan. 7 (Robin Carter, Caroline Eastman) and near Topsail Beach, NC Jan. 29 (Nell and Jimi Moore, Tonya Spires, Lin McClean).

MERLIN: This species was found at many inland sites this winter with the farthest away from the coast being the 2–3 birds present all winter in the Ashe-Alleghany Counties, NC area (fide James H. Coman, III).

YELLOW RAIL: The only report received was of one found along a dike at Magnolia Gardens, Charleston, SC Feb. 5 by Caroline Eastman.

KING RAIL: A rare winter record was of one on the Clemson, SC C.B.C. Dec. 17 (fide Steve Wagner).

WILSON'S PLOVER: One was found at its usual wintering spot on the Morehead City, NC C.B.C. Dec. 18 (Sam Cooper, Kevin Markham). This is about the only place in the Carolinas where an individual of this species sometimes holds over into winter.

AMERICAN AVOCET: Locally interesting were three at Edisto Island, SC Feb. 4 (Robin Carter, Caroline Eastman).

SPOTTED SANDPIPER: Winter reports included singles on the Wayne County, NC C.B.C. Dec. 17 (Russ and Patricia Tyndall) and the New Bern, NC C.B.C. Dec. 19 (John Wright).

WILLET: A Pea Island, NC C.B.C. record total of 480 was had Dec. 29 (Paul Sykes); no doubt due partly to the warm fall and winter weather.

LONG-BILLED CURLEW: The only report received involved the dependable Ft. Fisher, NC bird seen Jan. 1 and 14 (Ricky Davis, Gene Howe, Steve Gross).

LEAST SANDPIPER: A good winter inland count was the 30 on the Durham, NC C.B.C. Dec. 18 (fide Will Cook).

DUNLIN: Rare inland in winter, one was on the Wayne County, NC C.B.C. Dec. 17 (Eric Dean); one was on the Greensboro, NC C.B.C. Dec. 17 (Henry and Elizabeth Link); and two were at Falls L. near Raleigh Jan. 6 (Ricky Davis).

LONG-BILLED DOWITCHER: Locally rare were 11 at Ft. Fisher, NC Dec. 3 (Ricky Davis, Harry LeGrand); two on the New Bern, NC C.B.C. Dec. 19 (John Fussell); and the good count of 30 at the Yawkey W.M.A., Georgetown County, SC in December (Lex Glover, Mike Resch).

WILSON'S PHALAROPE: An extremely late individual was found at New Bern, NC Dec. 1 (Bob Holmes), providing a first Craven County record and a very rare winter report!

RED PHALAROPE: This species was found only offshore with 10 off Hatteras Feb. 11 (Brian Patteson, et al.) and 97 off Currituck Banks, NC Feb. 18 (Patteson, et al.0.

POMARINE JAEGER: The only onshore report was of one dark phase immature at Huntington Beach State Park, SC Jan. 29 (Pete Worthington).

PARASITIC JAEGER: One was seen off C. Hatteras Dec. 10 (Harry LeGrand, John Wright, CBC field trip participants) and off Inlet Point, Litchfield Beach, SC Feb. 11 by Pete Worthington.

GREAT SKUA: This species is seen very rarely in North Carolina waters, thus of interest were the three off Currituck Banks Feb. 18 (Brian Patteson, et al.).

LAUGHING GULL: Rare inland in winter, one was on the York/Rock Hill, SC C.B.C. Dec. 17 (Albert Conway). Also a first-winter bird was at the Raleigh, NC landfill Dec. 3; and a second-winter bird was there Dec. 15 (Bob Hader).

LITTLE GULL: In North Carolina this species was observed at C. Hatteras Jan. 28 (Ned Brinkley), Feb. 19 (Harry LeGrand, et al.), and Feb. 25 (Dave Sibley, Ray Schwartz, fide Pat Moore). Also birds were seen at Rodanthe Jan. 27 - 28 (Ricky Davis, Sam Cooper, Kevin Markham) and Oregon Inlet Feb. 12 (Russ and Patricia Tyndall). In South Carolina, where definitely much rarer, one was found at Huntington Beach State Park Jan. 21 (Taylor Piephoff, Lex Glover, et al.).

CALIFORNIA GULL: Reports of this species exploded with up to four different individuals present in the C. Hatteras, NC area this winter. Three adults and one first-winter immature were on the C.B.C. there Dec. 30 (fide Harry LeGrand); and these birds were relocated by many observers over the next two and a half months.

THAYER'S GULL: Up to two adults of this species were present at C. Hatteras this winter (Dec. 30 - Mar.) and were seen by many observers.

ICELAND GULL: There were at least five different Icelands in the C. Hatteras area this winter (m. ob.) with several adults and first-winter plumaged birds present. Away from the Outer Banks, one was at Morehead City, NC Jan. 20 (Derb Carter) and a second-winter bird was found at Myrtle Beach, SC Jan. 27 (Lex Glover, Mike Cheek).

LESSER BLACK-BACKED GULL: This gull continues to increase and the reports are too numerous to mention in detail. The peak count was the 39 at C. Hatteras Jan. 28 by Ned Brinkley. The species is also showing up inland each winter and the farthest inland this year was one adult at the Raleigh, NC landfill Dec. 17 and Feb. 13, 14 (Bob Hader). The farthest south was one first-winter immature at Huntington Beach State Park, SC Jan. 8 (Robin Carter, Caroline Eastman). Also of note was a rare offshore record of one off Hatteras, NC Feb. 11 (Brian Patteson, et al.).

GLAUCOUS GULL: This species has also showed an increase in inland reports with a first-winter bird at the Raleigh, NC landfill Dec. 14 (Bob Hader) and a second-winter bird at L. Townsend near Greensboro, NC Dec. 16 - 22 (Henry Link). On the coast, first-winter birds were found at the Yawkey W.M.A., Georgetown County, SC Dec. 22 (Lex Glover) and at C. Hatteras, NC Feb. 12 - 27 (m. ob.). An adult was also at C. Hatteras Feb. 27 (Dave Sibley, Ray Schwartz, fide Pat Moore).

GREAT BLACK-BACKED GULL: Inland reports increased with the farthest away from the coast being one adult at L. Townsend near Greensboro, NC Dec. 13 and Feb. 2 (Henry Link), a first county record.

BLACK-LEGGED KITTIWAKE: Onshore reports involved singles at C. Hatteras Dec. 30 (Roger McNeill), Jan. 8 (Russ and Patricia Tyndall), and Jan. 28 (Ned

Brinkley). Also one was at Salvo, NC Jan. 8 (Tyndalls, Earnhardt) and two were at Bodie Island, NC Dec. 29 (McNeill).

BLACK SKIMMER: A locally unusual report involved a single Skimmer seen feeding over a fresh-water impoundment on the eastern end of L. Mattamuskeet, NC Dec. 28 (Ricky Davis, John Wright).

DOVEKIE: The only report was of one off Currituck Banks, NC Feb. 18 (Brian Patteson, et al.).

THICK-BILLED MURRE: One was found at Myrtle Beach, SC Jan. 13 (Steve and Jill Patterson) and was relocated Jan. 28 by Caroline Eastman. This is a very rare species in South Carolina and all sightings should be studied in great detail.

RAZORBILL: This species was present in the Carolinas in far fewer numbers than last winter's invasion. The best count was the three off Hatteras, NC Feb. 11 (Brian Patteson, et al.). Razorbills were also found at Huntington Beach State Park, SC Jan. 21 - 30 (m. ob.); Wrightsville Beach, NC in early Feb. (m. ob.); C. Hatteras, NC Jan. 28 (Ned Brinkley) and Feb. 27,28 (Ricky Davis, Dave Sibley, Ray Schwartz); and Rodanthe, NC Jan. 28 (Sam Cooper, Kevin Markham).

ATLANTIC PUFFIN: North Carolina's second record of this species was provided by one off Currituck Banks Feb. 18 (Brian Patteson, et al.). This report was much more expected than the first which was a lone bird off of Hatteras in August of 1993!

EURASIAN COLLARED-DOVE: The group of birds found at Myrtle Beach, SC during the fall continued to persist. A count of 12 was had there Jan. 13 - 18 by Steve Patterson.

WHITE-WINGED DOVE: Most reports of this dove come in the fall season, thus of note was one at the east end of Ocracoke Island, NC Dec. 10 (Harry LeGrand, John Wright, CBC field trip participants).

COMMON GROUND-DOVE: A rare upstate report from South Carolina was had when one was found on the Clemson C.B.C. Dec. 17 by Don McGowan and Chuck Flint.

LONG-EARED OWL: This is a species seldom seen in the Carolinas, thus the three seen by several observers in a pine stand at the VOA-A site in Beaufort County, NC late Feb. to early Mar. were significant. The birds were first heard here Jan. 13, but were not located until Feb. 26 (John Wright, Eric Dean, Gene Howe, et al.). For the next two weeks, several lucky, patient observers were able to see the birds; an experience that may not happen again for a long time!

SAW-WHET OWL: Frank Enders continued banding of Saw-whets in Halifax County, NC this winter; and had a recapture (Dec. 13) of a previously banded bird (Nov. 19) from the same area. He also reported that three Saw-whets were banded in northeastern NC by Dave Brinker, et al. One was heard near L. Mattamuskeet, NC in mid-Feb. by Kelly Davis for the first local report of the species. In South Carolina, three were heard on the McClellanville C.B.C. Dec. 18 (fide Frank Enders).

WHIP-POOR-WILL: There were more reports than usual of wintering Whips in the Carolinas. In North Carolina individuals were on the New Bern C.B.C. Dec. 19 (Buddy Garrett) and the Wilmington C.B.C. Dec. 31 (Ricky Davis). In South

Carolina one was found near Summerton, Clarendon County Dec. 31 (Robin Carter, Caroline Eastman); one was on the Savannah River Site C.B.C. Dec. 20 (fide Anne and Vernon Waters); and another was on the Aiken C.B.C. Dec. 24 (fide Anne and Vernon Waters).

HUMMINGBIRDS: The winter of 1994-95 was probably the best ever for lingering, wintering hummingbirds in the Carolinas. *Selasphorus* hummers were found in Mt. Pleasant, SC (Giff Beaton); Morehead City, NC (John Fussell); on the Bodie-Pea Islands C.B.C. (fide Paul Sykes); Greenville, NC (fide Harry LeGrand); and Sumter, SC (fide Evelyn Dabbs). Definite Rufous Hummingbirds were at Wilmington, NC (fide Sam Cooper); Columbus, NC (Simon Thompson); and Simpsonville, SC (Pete Worthington). *Archilochus* reports included two at Mt. Pleasant, SC (Giff Beaton); one at Morehead City, NC (John Fussell); one at Southern Shores, NC (Lee Yoder); one on the Bodie-Pea Islands C.B.C. (fide Paul Sykes); an amazing four different individuals in the Buxton, NC area (fide Harry LeGrand); two at New Bern, NC (Bob Holmes); and one at L. Landing near L. Mattamuskeet, NC (fide Kelly Davis). Most observers were cautious as to the specific identity of these birds. The chance that there were Black-chinned Hummingbirds present in this big bunch is very high!

RED-HEADED WOODPECKER: This species was noted to be in better than average numbers in a couple of areas. The report of up to 9 in Tryon, NC Dec.-Mar. (Simon Thompson) provided a very rare winter record. Also the presence of 14 at Ft. Fisher, NC during the winter (Ricky Davis, Harry LeGrand) was a definite increase in the normal numbers for that locality.

WESTERN KINGBIRD: This rare in winter species was found twice: one was at Aiken, SC Dec. 24 (Larry and Carol Eldridge, fide Anne and Vernon Waters), and another was at Ft. Fisher, NC Jan. 1-10 (Ralph Widrig, Kevin Markham).

CAVE SWALLOW: North Carolina's third report of this species involved a single bird seen near Sneads Ferry Feb. 5 (Jimi and Nell Moore, John and Paula Wright). As with the previous reports, the bird did not stay for other observers to document the sighting.

BARN SWALLOW: Two were found on the Litchfield-Pawley's Island, SC C.B.C. Dec. 29 (fide Jack Peachey) for a rare winter occurrence.

FISH CROW: Four were on the Raleigh, NC C.B.C. Dec. 17 (fide Will Cook) and one was on the Clemson, SC C.B.C. (fide Steve Wagner) for rare winter reports. This species usually withdraws to the coast for the colder months.

COMMON RAVEN: This species seems to be continuing its gradual spread eastward in North Carolina. Once again, young were raised in downtown Winston-Salem (Ramona Snavely), and one was in Greensboro in late Feb. (Roger McNeill, fide Elizabeth Link). Also two were seen at another site in Guilford County Feb. 11 by Elizabeth Link.

SEDGE WREN: Rare in winter inland were two on the Wayne County, NC C.B.C. Dec. 17 (Roger McNeill, Eric Dean) and one on the Clemson, SC C.B.C. Dec. 17 (Pete Worthington).

GRAY CATBIRD: A catbird on the L. Lure, NC C.B.C. Jan. 1 (Simon Thompson) was very late and rare for that western locality in winter.

SPRAGUE'S PIPIT: The only report came from the site of last year's bird - the Orangeburg, SC Sod Farm. This time Robin Carter and Caroline Eastman observed one there Feb. 4; which turned out to be a one-day wonder.

WHITE-EYED VIREO: Rare inland in winter, one was found at Raven Rock State Park, NC Feb. 2 - Mar. 4, as noted by Paul Hart.

SOLITARY VIREO: Up to two different individuals were in the Tryon, NC area Dec. 17 - Jan. 18 (Simon Thompson). These were the first local area winter records.

ORANGE-CROWNED WARBLER: One was rare in winter on the Raleigh, NC C.B.C. Dec. 17 (fide Will Cook); another was even more out of place on the Shelby, NC C.B.C. Dec. 20 (Simon Thompson).

NORTHERN PARULA: A rare winter bird was the individual found on the C. Hatteras, NC C.B.C. Dec. 30 (Henry Link).

YELLOW WARBLER: Another lingering warbler on the C. Hatteras, NC C.B.C. Dec. 30 was a Yellow found in Frisco by Eric Fulcher and Lee Yoder.

CAPE MAY WARBLER: An adult male Cape May was found in Durham, NC Feb. 25 (Will Cook, et al.) providing the second winter record in as many years for the area!

BLACK-THROATED GRAY WARBLER: North Carolina's fourth Black-thr. Gray was a female found in Wilmington Jan. 31 - Feb. 16 (Trip Dennis, sev. ob.). Amazingly, three of the four records have come from the Wilmington area!

YELLOW-RUMPED "AUDUBON'S" WARBLER: The only report of this rare form came from Summerton, Clarendon County, SC Dec. 31, as noted by Robin Carter and Caroline Eastman.

WILSON'S WARBLER: Another rare winter warbler is the Wilson's. This season one was found at St. Matthews, Calhoun County, SC Dec. 20 (Caroline Eastman).

YELLOW-BREASTED CHAT: One was seen at Richlands, Onslow County, NC Jan. 30 (Nell Moore) for a rare winter report.

WESTERN TANAGER: The male returned to Kitty Kosh's Wilmington, NC yard in October and remained all winter for the third year in a row!

ROSE-BREASTED GROSBEAK: A female was seen near Wilmington, NC Dec. 31 by Roger McNeill for a very rare winter report. The bird was studied well enough to rule out the just as likely Black-headed.

INDIGO BUNTING: This species will sometimes linger in fall, but the presence of two at a site near Rocky Mount, NC all winter (Dec.- Mar.) was noteworthy (Ricky Davis).

PAINTED BUNTING: There were phenomenal numbers of wintering Painteds in North Carolina. One was on the Wayne County C.B.C. Dec. 17 (John Fussell, Eric Dean); one spent the winter at New Bern (fide Bob Holmes); two were at Southern Shores (Lee Yoder); four overwintered in Carteret County (Carolyn and Don Hoss, fide John Fussell); and four were in the Buxton-Frisco area all winter (C. Hatteras Bird Club).

CLAY-COLORED SPARROW: This rare winter sparrow was found in Simpsonville, SC Feb. 7 (Pete Worthington) and near L. Phelps, NC Feb. 25 (Ricky Davis).

LARK SPARROW: The only winter report received was of one in the mountains on the Stone Mountain, NC C.B.C. in December (Hartsell Cash, fide James H.

Coman, III).

GRASSHOPPER SPARROW: A good find was one at McBee W.M.A., Chesterfield County, SC Feb. 19 (Robin Carter, Caroline Eastman).

HENSLOW'S SPARROW: The only winter report was of one in southern Dorchester County, SC Feb. 5, as noted by Robin Carter and Caroline Eastman.

LeCONTE'S SPARROW: Up to three different individuals were found at the New Bern, NC airfield Dec. 1 - late Feb. (Bob Holmes, m. ob.). These birds represented the first record for Craven County. Also one was found at the Yawkey W.M.A., Georgetown County, SC Dec. 21 (Lex Glover), for a good find.

LINCOLN'S SPARROW: One on the Clemson, SC C.B.C. Dec. 17 (Pete Worthington) provided a rare local winter record. Also of note was the presence of one that overwintered near Rocky Mount, NC (Ricky Davis), a rare event that far inland.

HARRIS' SPARROW: South Carolina's third Harris' Sparrow was found near Santee N.W.R. Jan. 3 (Robin Carter, Caroline Eastman) and it remained until at least Feb. 25 (Tim Kalbach). The bird proved quite dependable and was seen by countless observers during its stay.

DARK-EYED "OREGON" JUNCO: An individual of this western form was found at Jordan L., NC Dec. 13 (Ned Brinkley, Sam Cooper) for one of the few reports in recent years.

LAPLAND LONGSPUR: The only reports of this species included five at the Orangeburg Sod Farm, SC Jan. 3 - 17 (Robin Carter, Caroline Eastman, Lex Glover) and two near L. Phelps, NC Feb. 25 (Ricky Davis).

SNOW BUNTING: One was found on the shore of Jordan L., NC Dec. 11 (Will Cook, et al.) for a rare inland sighting.

BREWER'S BLACKBIRD: Robin Carter and Caroline Eastman found three (2 males, one female) at Bowman, Orangeburg County, SC Dec. 11 - Jan. 1 for a rare local report. Also rare were six found on the Aiken, SC C.B.C. Dec. 24 (Anne and Vernon Waters).

NORTHERN "BULLOCK'S" ORIOLE: This very rare western form was found once, at Magnolia Gardens, Charleston, SC Jan. 28 by Simon Thompson.

PURPLE FINCH: Numbers of this species were way down this winter. Some observers did not encounter a single one all season! The best count received was of 41 on the Greenville, SC C.B.C. Dec. 31 (fide Pete Worthington); but most reports involved single-digit totals.

RED CROSSBILL: The Red Crossbill report from Caesar's Head State Park, SC in June 1994 (Chat 59:82) was in error. The locality was Mt. Mitchell, NC!

PINE SISKIN: Another winter finch in short supply was the Siskin with only four reports totalling nine birds being received from across both Carolinas!

EVENING GROSBEAK: This species was as close to being non-existent in the Carolinas as possible with only one report received. Three at a feeder in Stokesdale, NC (Jean McCoy, fide Herb Hendrickson) was it. These birds must have felt lost and all alone!

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(USPS 101-020)

Quarterly Bulletin of Carolina Bird Club, Inc.
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